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'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

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L11 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:58434 HCAPLUS
DN 140:196731
ED Entered STN: 23 Jan 2004
TI Zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblasts**
AU **Wu, X.**; Itoh, N.; Taniguchi, T.; Nakanishi, T.; Tanaka, K.
CS Department of Toxicology, Graduate School of Pharmaceutical Sciences, Osaka University, Osaka, 565-0871, Japan
SO Biomedical Research on Trace Elements (2003), 14(4), 377-378
CODEN: BRTEE5; ISSN: 0916-717X
PB Nippon Biryo Genso Gakkai
DT Journal
LA Japanese/English
CC 13-2 (Mammalian Biochemistry)
AB Zinc is an essential trace element that increases osteoblast nos. and bone formation. However, the precise mechanisms involved in zinc-induced differentiation of osteoblasts are poorly understood. We examined the roles of L-ascorbic acid (AA) and its transporter, sodium-dependent vitamin C transporter (SVCT) 2, in zinc-induced osteoblast differentiation. Results from Northern blotting indicated that zinc induced SVCT2 mRNA either in the absence or presence of AA. Results from [14C]AA uptake assays and Western blotting showed that zinc increased the functional SVCT2 protein levels and AA transport. These zinc-induced effects were observed both in the presence and in the absence of AA. However, in the presence of AA, 50 mM zinc induced mRNA of the osteoblast differentiation markers, alkaline phosphatase, α1(I) procollagen, osteopontin (OPN), and osteocalcin (OCN); while in the absence of AA, except for ALP and α1(I) procollagen mRNA, the 50 mM zinc can hardly induce expression of OPN and OCN mRNA. These findings suggest that AA and SVCT2 partly mediate zinc-induced osteoblast differentiation.
ST zinc sodium dependent vitamin C transporter **osteoblast** differentiation

IT Transport proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(SVCT2 (sodium-dependent vitamin C transporter 2); zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblast** differentiation)
IT **Osteoblast**
(differentiation; zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblast** differentiation)
IT Cell differentiation
(**osteoblast**; zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblast** differentiation)
IT Collagens, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(procollagens, type I, α1-chain; zinc-induced expression of sodium-dependent vitamin C transporter 2 gene in **osteoblast** differentiation in relation to)
IT Biological transport
(uptake; zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblast** differentiation)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(zinc-induced expression of sodium-dependent vitamin C transporter 2 gene in **osteoblast** differentiation)
IT **Osteocalcins**
Osteopontin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(zinc-induced expression of sodium-dependent vitamin C transporter 2 gene in **osteoblast** differentiation in relation to)
IT 9001-78-9
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(zinc-induced expression of sodium-dependent vitamin C transporter 2 gene in **osteoblast** differentiation in relation to)
IT 50-81-7, Vitamin C, biological studies 7440-23-5, Sodium, biological studies 7440-66-6, Zinc, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(zinc-induced expression of sodium-dependent vitamin C transporter 2 in **osteoblast** differentiation)

L11 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:996204 HCAPLUS
DN 140:160988
ED Entered STN: 23 Dec 2003
TI Dedifferentiation of Lineage-Committed Cells by a Small Molecule
AU Chen, Shuibing; Zhang, Qisheng; **Wu, Xu**; Schultz, Peter G.; **Ding, Sheng**
CS Department of Chemistry and the Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
SO Journal of the American Chemical Society (2004), 126(2), 410-411
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
CC 13-6 (Mammalian Biochemistry)
AB Combinatorial libraries were screened for mols. that induce mouse myogenic lineage committed cells to dedifferentiate in vitro. A 2,6-disubstituted purine, reversine, was discovered that induces lineage reversal of C2C12 cells to become multipotent progenitor cells which can redifferentiate into osteoblasts and adipocytes. This and other such mols. are likely to provide new insights into the mol. mechanisms that control cellular dedifferentiation and may ultimately be useful to in vivo stem cell biol.

and therapy.
ST reversine dedifferentiation myoblast **osteoblast** adipocyte differentiation
IT Adipose tissue
(adipocyte, differentiation; dedifferentiation of myoblast lineage-committed cells by small mol. reversine and redifferentiation into **osteoblasts** and adipocytes)
IT Cell differentiation
(adipocyte; dedifferentiation of myoblast lineage-committed cells by small mol. reversine and redifferentiation into **osteoblasts** and adipocytes)
IT **Osteoblast**
(differentiation; dedifferentiation of myoblast lineage-committed cells by small mol. reversine and redifferentiation into **osteoblasts** and adipocytes)
IT Cell differentiation
(**osteoblast**; dedifferentiation of myoblast lineage-committed cells by small mol. reversine and redifferentiation into **osteoblasts** and adipocytes)
IT 656820-32-5, Reversine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dedifferentiation of lineage-committed cells by small mol. reversine)
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L11 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:865943 HCAPLUS
DN 138:85882
ED Entered STN: 15 Nov 2002
TI A Small Molecule with **Osteogenesis**-Inducing Activity in Multipotent Mesenchymal Progenitor Cells
AU **Wu, Xu**; **Ding, Sheng**; Ding, Qiang; **Gray, Nathanael S.**; Schultz, Peter G.
CS Department of Chemistry and the Skaggs Institute for Chemical Biology, Scripps Research Institute, La Jolla, CA, 92037, USA
SO Journal of the American Chemical Society (2002), 124(49), 14520-14521
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 1
AB Purmorphamine, which is a 2,6,9-trisubstituted purine compound, was discovered through cell-based high-throughput screening from a heterocycle combinatorial library. It differentiates multipotent mesenchymal progenitor cells into an osteoblast lineage. It will serve as a unique

chemical tool to study the mol. mechanisms of osteogenesis of stem cells and bone development.
ST purmorphamine **osteogenesis** mesenchyme progenitor cell
IT Bone
Combinatorial library
High throughput screening
Mesenchyme
(small mol. with **osteogenesis**-inducing activity in multipotent mesenchymal progenitor cells)
IT Embryo, animal
(stem cell; small mol. with **osteogenesis**-inducing activity in multipotent mesenchymal progenitor cells)
IT 483367-10-8, Purmorphamine
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(small mol. with **osteogenesis**-inducing activity in multipotent mesenchymal progenitor cells)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) Aubin, J; Principles of Bone Biology 1996, P51
(3) Ding, S; J Am Chem Soc 2002, V124, P1594 HCAPLUS
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L11 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:523266 HCAPLUS
DN 137:257907
ED Entered STN: 14 Jul 2002
TI Differential effects of interleukin-6 receptor activation on intracellular signaling and bone resorption by isolated rat **osteoclasts**
AU Moonga, B. S.; Adebanjo, O. A.; Wang, H-J.; Li, S.; **Wu, X. B.**; Troen, B.; Inzerillo, A.; Abe, E.; Minkin, C.; Huang, C. L-H.; Zaidi, M.
CS The Mount Sinai Bone Program and the Division of Endocrinology, Diabetes and Bone Diseases, Mount Sinai School of Medicine, Bronx Veterans Affairs Medical Center, New York, NY, 10029, USA
SO Journal of Endocrinology (2002), 173(3), 395-405
CODEN: JOENAK; ISSN: 0022-0795
PB Society for Endocrinology
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 15
AB The effects of the related cytokines interleukin-6 (IL-6), leukemia inhibitory factor (LIF) and oncostatin-M on bone resorption and cytosolic Ca2+ signaling were compared in isolated rat osteoclasts. In the traditional disaggregated osteoclast (pit) assay, IL-6 and LIF, but not oncostatin-M, conserved the bone resorption otherwise inhibited by high extracellular [Ca2+] (15 mM). It produced a paradoxical, concentration-dependent

stimulation of resorption by elevated extracellular Ca2+. In the micro-isolated single osteoclast resorption assay, IL-6, high [Ca2+] or IL-6 plus high [Ca2+] all increased pit formation. In contrast, the IL-6 receptor (IL-6R)-specific agonist antibody MT-18 inhibited bone resorption in a concentration-dependent manner (1:500 to 1:500000). MT-18 triggered cytosolic Ca2+ signals in fura 2-loaded osteoclasts within .apprx.10 min of application. Each cytosolic Ca2+ transient began with a peak deflection that persisted in Ca2+-free, EGTA-containing extracellular medium, consistent with a release of intracellularly stored Ca2+. This was followed by a sustained elevation of cytosolic [Ca2+] that was abolished in Ca2+-free medium, as expected from an entry of extracellular Ca2+, and by the Ca2+ channel antagonist Ni2-. The inclusion of either IL-6 or soluble human (sh) IL-6R specifically reversed both the above effects of MT-18, confirming that both effects were specific for the IL-6R. The findings suggest that IL-6R activation by IL-6 stimulates osteoclastic bone resorption either by reversing the inhibitory effect of high extracellular Ca2+ in stromal-containing systems or itself stimulating bone resorption along with Ca2+ by micro-isolated osteoclasts. In contrast, activation of the IL-6R by an agonist antibody produces an inhibition of bone resorption and an associated triggering of the cytosolic Ca2+ signals previously associated with regulation of bone resorptive function in other situations.

ST **osteoclast** bone resorption signaling interleukin 6 receptor

IT **Osteoclast**
Signal transduction, biological
(differential effects of interleukin-6 receptor activation on intracellular signaling and bone resorption by isolated rat **osteoclasts**)

IT Interleukin 6
Interleukin 6 receptors
Leukemia inhibitory factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(differential effects of interleukin-6 receptor activation on intracellular signaling and bone resorption by isolated rat **osteoclasts**)

IT Bone
(resorption; differential effects of interleukin-6 receptor activation on intracellular signaling and bone resorption by isolated rat **osteoclasts**)

IT 7440-70-2, Calcium, biological studies 106956-32-5, Oncostatin-M
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(differential effects of interleukin-6 receptor activation on intracellular signaling and bone resorption by isolated rat **osteoclasts**)

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L11 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:200448 HCAPLUS
DN 136:319556
ED Entered STN: 19 Mar 2002
TI Effects of 17β-estradiol on the expression of membrane type 1 matrix metalloproteinase (MT1-MMP) and MMP-2 in human **osteoblastic** MG-63 cell cultures
AU Liao, E.-Y.; Luo, X.-H.; Deng, X.-G.; **Wu, X.-P.**
CS Institute of Endocrinology and Metabolism, The Second Affiliated Hospital, Human Medical University, Hunan, 410011, Peop. Rep. China
SO Journal of Endocrinological Investigation (2001), 24(11), 876-881
CODEN: JEIND7; ISSN: 0391-4097
PB Editrice Kurtis s.r.l.
DT Journal
LA English
CC 2-4 (Mammalian Hormones)
AB Estrogens are important regulators of bone cell function. Osteoblast-derived membrane type 1 matrix metalloproteinases (MT1-MMP) have recently been implied to play an important role in the process of bone resorption by proteolytically activating latent matrix metalloproteinase-2 (proMMP-2) at the cell surface and degrading tumor necrosis factor-α (TNF-α). In the present study, we observed the effects of 17β-estradiol (E2) on MT1-MMP production and subsequent activation of latent matrix proMMP-2, and also proMMP-2 secretion in cultures of human osteoblastic MG-63 cells. Western immunoblot anal. showed that treatment with increasing doses of E2 in MG-63 cells caused a dose-dependent increase in expression of MT1-MMP protein. Confocal immunohistochem. anal. also confirmed that E2 induced MT1-MMP synthesis in MG-63 cells. We found unexpectedly that although MT1-MMP synthesis was up-regulated by E2 in cultures of MG-63 cells, activation of proMMP-2 was unchanged, which can be attributed partly to the undetectable tissue inhibitor of metalloproteinase-2 (TIMP-2) protein in MG-63 cells by

Western immunoblotting. ProMMP-2 production was also not influenced by E2. In conclusion, E2 induces MT1-MMP protein expression in MG-63 cells while it is not followed by proMMP-2 activation, E2 may suppress bone resorption by accentuated degradation of TNF-α which mediated through increasingly MT1-MMP production in osteoblastic cells.

ST estradiol membrane type 1 matrix metalloproteinase **osteoblast**; bone resorption suppression mechanism estrogen

IT Human
Osteoblast
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP) and MMP-2 in human **osteoblastic** MG-63 cell cultures)

IT Estrogens
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP) and MMP-2 in human **osteoblastic** MG-63 cell cultures)

IT Hormone replacement therapy
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP), MMP-2, TIMP-2 in human **osteoblastic** MG-63 cell cultures)

IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(estradiol may suppress bone resorption by accentuated degradation of TNF-α mediated through increased MT1-MMP production)

IT **Osteoporosis**
(postmenopausal; estradiol may suppress bone resorption by accentuated degradation of TNF-α mediated through increased MT1-MMP production)

IT Bone
(resorption; estradiol may suppress bone resorption by accentuated degradation of TNF-α mediated through increased MT1-MMP production)

IT 148969-98-6, Promatrix metalloproteinase-2 161384-17-4, Membrane type 1 matrix metalloproteinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP) and MMP-2 in human **osteoblastic** MG-63 cell cultures)

IT 50-28-2, 17β-Estradiol, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP) and MMP-2 in human **osteoblastic** MG-63 cell cultures)

IT 124861-55-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of 17β-estradiol on expression of membrane type 1 matrix metalloproteinase (MT1-MMP), MMP-2, TIMP-2 in human **osteoblastic** MG-63 cell cultures)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L11 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:793633 HCAPLUS
DN 132:217438
ED Entered STN: 16 Dec 1999
TI Frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice
AU **Wu, X.**; Peters, J. M.; Gonzalez, F. J.; Prasad, H. S.; Rohrer, M. D.; Gimble, J. M.
CS Department of Surgery, University of Oklahoma Health Science Center, Oklahoma City, OK, USA
SO Bone (New York) (2000), 26(1), 21-26
CODEN: BONEDL; ISSN: 8756-3282
PB Elsevier Science Inc.
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB The bone marrow stroma, consisting of adipocytes, fibroblasts, and osteoblasts, develops from a multipotent mesenchymal progenitor. The recently described nuclear hormone receptors, known as peroxisome proliferator-activated receptors (PPARs), regulate transcription of genes involved in adipogenesis. Consistent with this is the observation that PPARα-null mice exhibit greater extramedullary adipose stores compared with their wild-type controls. To determine if the status of the PPARα protein also influenced bone marrow stromal cell differentiation, this study compared the frequency of colony forming units for bone marrow adipocytes (CFU-A), alkaline phosphatase-pos. fibroblasts (CFU-F/ALP+), and osteoblasts (CFU-O) between wild-type and PPARα-null mice. The CFU frequencies for all lineages were not significantly different in either gender at age 3 wk, independent of the PPARα background. However, histol. anal. showed that the cross-sectional area of the femur in male PPARα null mice was significantly greater than that of PPARα-null female mice and of both wild-type genders. This was due to an increased marrow cavity space rather than an increased cortical bone area. In addition, while the percentage area of cortical bone occupied by lacunae was equivalent in the PPARα and wild-type males, this value was significantly greater in PPARα-null female mice compared with wild-type females. At age 3-6 mo, no significant difference was observed in the CFU-A frequencies, based on either PPARα status or gender. The wild-type male CFU-F/ALP+ frequency was significantly greater than the CFU-F/ALP+ in all other groups. Although the PPARα status had no influence on the CFU-O frequency, the number of CFU-O was greater in male than in female mice. Sequential incubation of stromal cells in either adipogenic- or osteoblastic-inducing media did not alter the number of CFU-A or CFU-O. These results indicate that the PPARα-null genotype does not influence bone marrow stromal cell nos.
ST PPAR fibroblast adipocyte **osteoblast** differentiation stroma bone marrow
IT Adipose tissue
(adipocyte, in bone marrow stroma; frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice)

IT Cell differentiation
(frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice)
IT Fibroblast
Osteoblast
(in bone marrow stroma; frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice)
IT Bone marrow
(stroma; frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice)
IT Peroxisome proliferator-activated receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(α; frequency of stromal lineage colony forming units in bone marrow of peroxisome proliferator-activated receptor-α-null mice)
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L11 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:742751 HCAPLUS
DN 126:17000
ED Entered STN: 18 Dec 1996
TI The function of adipocytes in the bone marrow stroma: An update
AU Gimble, J. M.; Robinson, C. E.; **Wu, X.**; Kelly, K. A.
CS Immunobiology and Cancer Program, Oklahoma Medical Research Foundation, Oklahoma, OK, 73104, USA
SO Bone (New York) (1996), 19(5), 421-428
CODEN: BONEDL; ISSN: 8756-3282
PB Elsevier
DT Journal; General Review
LA English
CC 13-0 (Mammalian Biochemistry)
AB A review, with 108 refs. The adipocyte is the most abundant stromal cell phenotype in adult human bone marrow. Four hypotheses may explain their function. First, adipocytes may serve a passive role, simply occupying excess space in the bone marrow cavity. Second, they may play an active role in systemic lipid metabolism Third, adipocytes may provide a localized energy reservoir in the bone marrow. Or fourth, marrow adipocytes may contribute directly to the promotion of hematopoiesis and influence osteogenesis. This article reviews recent findings concerning bone marrow adipocyte morphol. and physiol., the transcriptional and cytokine mechanisms regulating their differentiation, and the interrelationships existing between bone marrow adipocytes, hematopoiesis, and osteogenesis. Overall, these data lend support to a "plastic" model of bone marrow stromal cell differentiation; adipocytes may share common functions with stromal stem cells, osteoblasts, and hematopoietic supportive cells.
ST review adipocyte differentiation bone marrow stroma; transcription factor cytokine adipocyte adipogenesis review
IT Adipose tissue
(adipocyte; adipogenesis and function of adipocytes in bone marrow stroma)
IT Cell differentiation
(adipogenesis and function of adipocytes in bone marrow stroma)
IT Hematopoiesis
Osteoblast
(adipogenesis and function of adipocytes in bone marrow stroma in relation to)
IT Cytokines
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adipogenesis and function of adipocytes in bone marrow stroma in relation to)
IT Growth factors, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(adipogenic factors; adipogenesis and function of adipocytes in bone

marrow stroma)
IT Bone marrow
(stroma; adipogenesis and function of adipocytes in bone marrow stroma)

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http://www.cas.org/ONLINE/DBSS/registryss.html

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L19             STR
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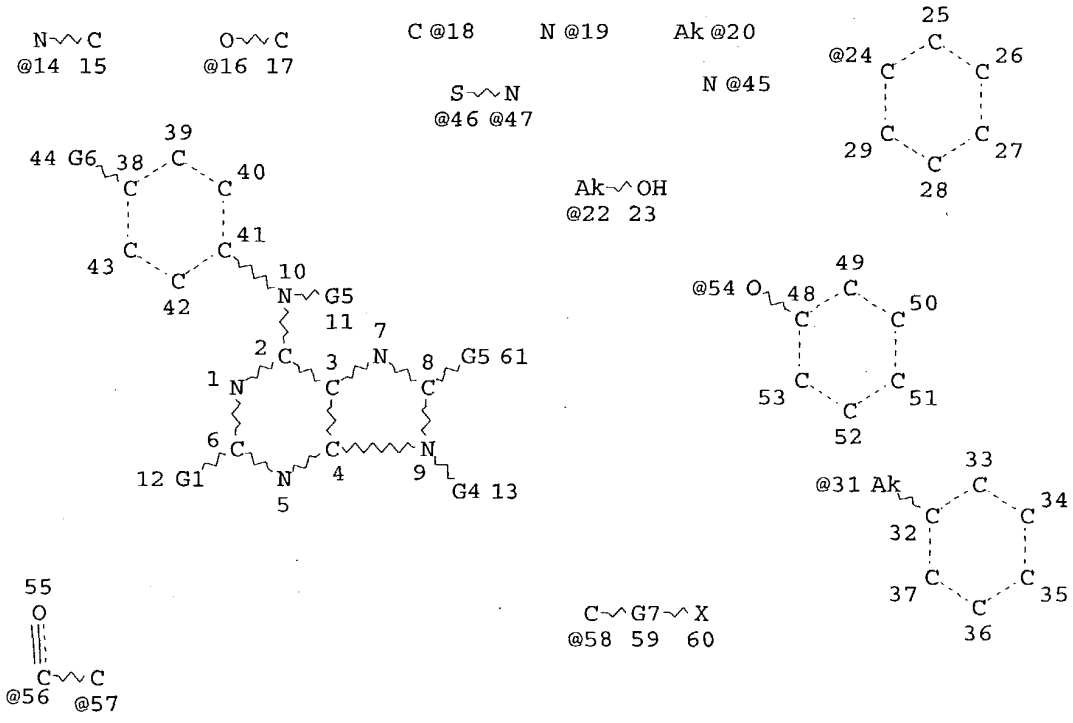


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VAR G5=H/ME
VAR G6=X/20/45/46/47/54/56/57/58
REP G7=(0-9) C
NODE ATTRIBUTES:
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NSPEC IS R AT 19
NSPEC IS C AT 45
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 59

STEREO ATTRIBUTES: NONE
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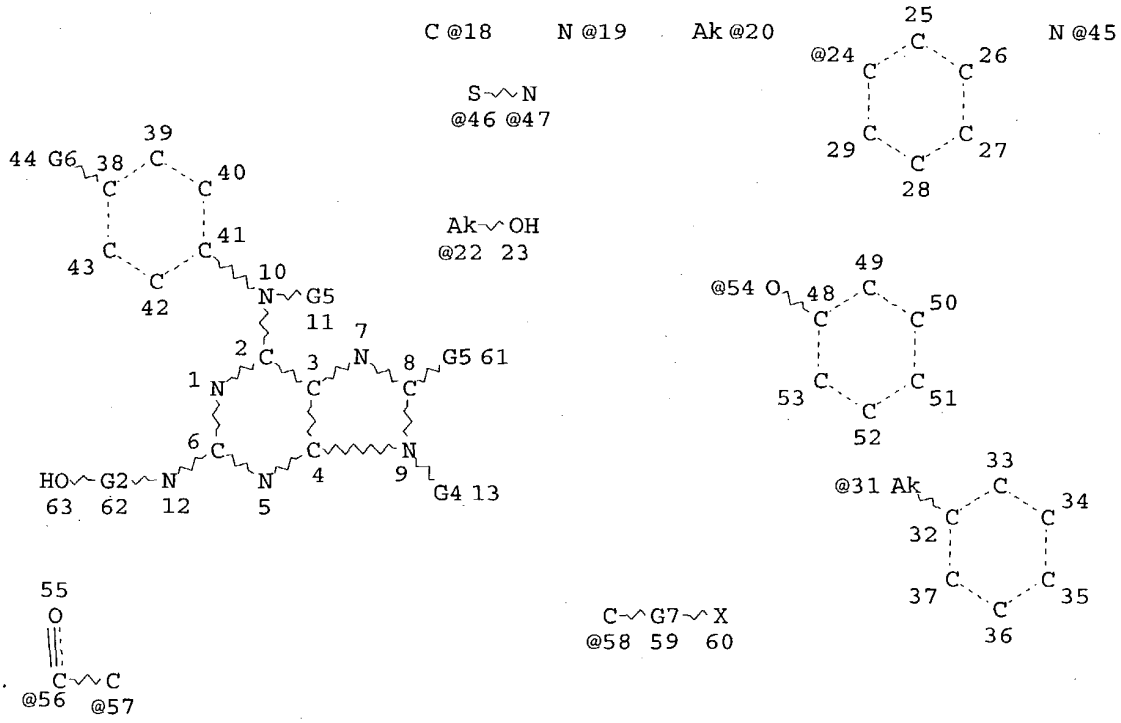
L22 STR



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VAR G4=18/19/20/22/24/31
VAR G5=H/ME
VAR G6=X/45/46/47/54/56/57/58
REP G7=(0-9) C
NODE ATTRIBUTES:
NSPEC IS R AT 18
NSPEC IS R AT 19
NSPEC IS C AT 45
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 57

STEREO ATTRIBUTES: NONE
L24 21 SEA FILE=REGISTRY SUB=L21 SSS FUL L22
L29 283 SEA FILE=REGISTRY ABB=ON PLU=ON L21 NOT L24

L30 82 SEA FILE=REGISTRY ABB=ON PLU=ON L29 NOT OC4/ES

=> b hcap
FILE 'HCAPLUS' ENTERED AT 12:03:00 ON 24 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 24 Mar 2004 VOL 140 ISS 13
FILE LAST UPDATED: 23 Mar 2004 (20040323/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d all hitstr tot l31

L31 ANSWER 1 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:182368 HCAPLUS
ED Entered STN: 05 Mar 2004
TI Three hybrid assay system for isolating ligand-binding polypeptides and
for isolating small mol. ligands
IN Come, Jon H.; Becker, Frank; Kley, Nikolai A.; Reichel, Christoph
PA USA
SO U.S. Pat. Appl. Publ., 238 pp., Cont.-in-part of U.S. Ser. No. 91,177.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-68
ICS G01N033-53; C07H021-04
NCL 435006000; 435007100; 536023100; 530350000; 552653000; 552500000;
536123000; 546001000; 540200000; 530317000
CC 1-1 (Pharmacology)
Section cross-reference(s): 9, 28
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004043388	A1	20040304	US 2002-234985	20020903
	US 2003165873	A1	20030904	US 2002-91177	20020304
PRAI	US 2001-272932P	P	20010302		
	US 2001-278233P	P	20010323		
	US 2001-329437P	P	20011015		
	US 2002-91177	A2	20020304		

AB The invention provides compns. and methods for isolating ligand-binding
polypeptides for a user-specified ligand, and for isolating small mol.
ligands for a user-specified target polypeptide using an improved class of
hybrid ligand compds. Preparation of compds., e.g a methotrexate moiety linked

by a polyethylene gycol moiety to dexamethasone, is described.

ST three hybrid assay system ligand polypeptide; methotrexate dexamethasone conjugate prepn three hybrid assay system

IT INDEXING IN PROGRESS

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(55,000-mol.-weight; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ADE2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CAN1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CBD tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CYH1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT DNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA binding domain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(E tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Immunophilins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(FKBP-12 (FK 506-binding protein, 12 kDa), fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GAL4; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(GyrB, fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(H-1; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(HIS3, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LEU2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LYS2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MBP (maltose-binding protein), fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Myc tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(PLV, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(S tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(T7 tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP1, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP2, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tag 100; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tet-R, fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(URA3, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(URA3, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(V5 tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(VSV tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Xpress tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Transcriptional regulation
(activation, transcriptional activation domain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Genomic library
(bacterial or eukaryotic genomic DNA fragment library; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(calmodulin binding peptide tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cat, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Estrogens
Ligands
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugated; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Acid halides
Alcohols
Aldehydes
Alkaloids
Alkanes
Alkenes
Alkyl halides
Alkynes
Amides
Amine oxides
Amines
Amino acids
Anhydrides
Aromatic hydrocarbons
Aryl halides
Cannabinoids
Carboxylic acids
Cyanohydrins
Enamines
Enzymes
Esters
Ethers
Imines
Lipids
Nitriles
Nucleic acids
Nucleosides
Nucleotides
Organometallic compounds
Peptides
Polysaccharides
Prostaglandins
Proteins
Quaternary ammonium compounds
Steroids
Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Sulfonic acids
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Cell
(extract; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fluorescent, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Androgen receptors
Cannabinoid receptors
Estrogen receptors
Glucocorticoid receptors
Progesterone receptors
Retinoic acid receptors
Steroid receptors

Vitamin D receptors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gfp, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(green fluorescent, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Analysis
(halo growth assay; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Aldehydes
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxy, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Peptides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(intein/chitin binding domain tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Gene, microbial
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lacZ, reporter gene; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Transcription factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactose repressors; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(library; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Structure-activity relationship
(ligand-binding; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ligand-binding; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Microtiter plates
(microtiter plate growth assay; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(phi-29 terminal protein; three hybrid assay system for isolating

ligand-binding polypeptides and for isolating small mol. ligands)

IT DNA formation factors
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rep; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Hemagglutinins
Thioredoxins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tag; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Drug screening
Fluorometry
Immobilization, molecular or cellular
Linking agents
Molecular association
Protein motifs
Surface plasmon resonance
cDNA library
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Chimeric gene
Fusion proteins (chimeric proteins)
Glycoconjugates
Polynucleotides
Reporter gene
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Lactams
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(β-, antibiotics, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT Antibiotics
(β-lactam, conjugates; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 9002-03-3, Dihydrofolate reductase 9073-60-3, β-Lactamase 50812-37-8, Glutathione-S-transferase
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fusion protein including domain of; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 9002-88-4, Polyethylene
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 60267-61-0, Ubiquitin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(subdomain; three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 9031-44-1, Kinase (phosphorylating) 109136-49-4, Ubiquitin-specific protease 141349-86-2, cdk2 kinase 147014-97-9, cdk4 kinase 150428-23-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 50-02-2D, Dexamethasone, conjugates 53-06-5D, Cortisone, conjugates 57-83-0D, Progesterone, conjugates 58-22-0D, Testosterone, conjugates 58-85-5D, Biotin, conjugates 59-05-2D, Methotrexate, conjugates 60-54-8D, Tetracycline, conjugates 69-79-4D, Maltose, conjugates 70-18-8D, Glutathione, conjugates 108-95-2D, Phenol, conjugates 302-79-4D, Retinoic acid, conjugates 303-81-1D, Novobiocin, conjugates 1127-93-1D, 2,4-Diaminopteridine, conjugates 1406-16-2D, vitamin D, conjugates 7440-02-0D, Nickel, conjugates 7440-43-9D, Cadmium, organocadmium compound conjugates 53123-88-9D, Rapamycin, conjugates 64134-30-1, Hexahistidine 79217-60-0D, Cyclosporin, conjugates 98849-88-8 104987-11-3D, fk506, conjugates 359886-84-3D, conjugates 439211-02-6, Streptactin
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

IT 383-63-1, Ethyl trifluoroacetate **212844-54-7**, Purvalanol B
RL: RCT (Reactant); RACT (Reactant or reagent)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

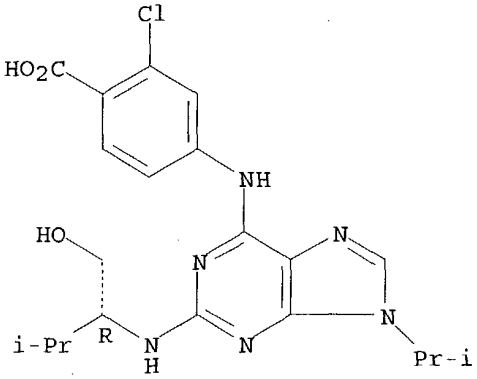
IT INDEXING IN PROGRESS

IT **212844-54-7**, Purvalanol B
RL: RCT (Reactant); RACT (Reactant or reagent)
(three hybrid assay system for isolating ligand-binding polypeptides and for isolating small mol. ligands)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 2 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:2886 HCAPLUS

DN 140:77157

ED Entered STN: 02 Jan 2004

TI Preparation of novel purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity

IN Bailey, Andrew; Pairaudeau, Garry; Patel, Anil; Thom, Stephen

PA Astrazeneca AB, Swed.

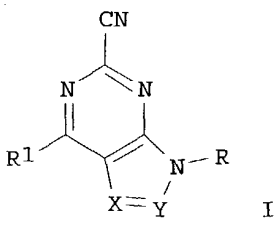
SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D473-00
ICS C07D487-04; A61K031-52; A61K031-519; A61P011-00; A61P019-00; A61P019-10; A61P025-28; A61P029-00
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004000843	A1	20031231	WO 2003-SE1079	20030623

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI SE 2002-1980 A 20020624
OS MARPAT 140:77157
GI



I

AB The title compds. [I; X = N, NH, CH, CH2; Y = N, CH, CO, CH2, CNR2R3 (wherein R2, R3 = H, alkyl, cycloalkyl); R = (un)substituted (hetero)aryl, H, alkyl, cycloalkyl, etc.; R1 = Z(CH2)pR7 (wherein p = 0-2; Z = O, NR8; R8 = H, alkyl, cycloalkyl; R7 = (un)substituted 5-6 membered saturated ring containing one or more O, S or N atoms, aryl or heteroaryl), NR9R10 (R9, R10 = H, alkyl, etc.; or NR9R10 = (un)substituted 5-6 membered saturated ring optionally containing a further O, S or N atom)] which are reversible inhibitors of cysteine proteases S, K, F, L and B (no data), and therefore useful for treating diseases associated with cysteine protease activity (especially diseases associated with Cathepsin S), were prepared Thus, a 4-step synthesis of 1-[9-(4-chlorophenyl)-2-cyano-9H-purin-6-yl]-L-prolinamide (starting from 4-chloroaniline and 5-amino-4,6-dichloro-2-propylthiopyrimidine), was given. Pharmaceutical composition comprising the compound I is claimed.
ST purinecarbonitrile pyrrolopyrimidinecarbonitrile prepn analgesic cysteine protease Cathepsin S inhibitor
IT Analgesics
Human
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for

treating diseases associated with cysteine protease activity)

IT Pain
(treating; preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

IT 37353-41-6, Cysteine protease 71965-46-3, Cathepsin S
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

IT 640284-95-3P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

IT 640284-82-8P 640284-83-9P 640284-84-0P 640284-85-1P 640284-86-2P
640284-87-3P 640284-88-4P 640284-89-5P 640284-90-8P 640284-91-9P
640284-92-0P 640284-93-1P 640284-94-2P 640284-96-4P 640284-97-5P
640284-98-6P 640284-99-7P 640285-00-3P 640285-01-4P 640285-02-5P
640285-03-6P 640285-04-7P 640285-05-8P 640285-06-9P 640285-07-0P
640285-08-1P 640285-09-2P 640285-10-5P 640285-11-6P 640285-12-7P
640285-13-8P 640285-14-9P 640285-15-0P 640285-16-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

IT 95-51-2, 2-Chloroaniline 106-47-8, 4-Chloroaniline, reactions
110-91-8, Morpholine, reactions 598-10-7, Cyclopropane-1,1-dicarboxylic acid 5451-40-1, 2,6-Dichloropurine 7531-52-4, L-Prolinamide
10182-68-0 14036-06-7, Diethoxymethyl acetate 16420-13-6, Dimethylthiocarbamoyl chloride 57564-94-0 145783-14-8, 4,6-Dichloro-5-nitro-2-(propylthio)pyrimidine 145783-15-9 639855-27-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

IT 16285-46-4P 16285-55-5P 19406-00-9P, Methyl 2-oxotetrahydrofuran-3-carboxylate **190655-15-3P** 439803-63-1P 639855-26-8P
639855-38-2P 639855-39-3P 640285-17-2P 640285-19-4P 640285-21-8P
640285-22-9P 640285-23-0P 640285-24-1P 640285-25-2P 640285-26-3P
640285-27-4P 640285-28-5P 640285-29-6P 640285-30-9P 640285-31-0P
640285-32-1P 640285-33-2P 640285-34-3P 640285-35-4P 640285-36-5P
640285-37-6P 640285-38-7P 640285-39-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
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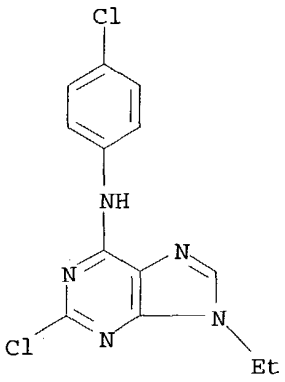
(2) Kissei Yakuhin Kogyo Kk; JP 2001011037 A 2001 HCAPLUS
(3) Metcalf, C; US 2002132819 A1 2002 HCAPLUS
(4) Naeja Pharmaceutical Inc; WO 0232879 A1 2002 HCAPLUS
(5) Novartis Ag; WO 03020721 A1 2003 HCAPLUS

IT **190655-15-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine- or pyrrolo[2,3-d]pyrimidine-2-carbonitriles for treating diseases associated with cysteine protease activity)

RN 190655-15-3 HCAPLUS

CN 9H-Purin-6-amine, 2-chloro-N-(4-chlorophenyl)-9-ethyl- (9CI) (CA INDEX NAME)



L31 ANSWER 3 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:1006999 HCAPLUS
DN 140:28026
ED Entered STN: 26 Dec 2003
TI Process for the preparation and crystallization of polymorph heterocyclyl substituted adenosine derivative
IN Shipton, Mark Ralph; Smith, Neil Michael; Whitehead, Andrew Jonathan; Wood-Kaczmar, Marian Wladyslaw
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H019-00
CC 33-9 (Carbohydrates)
Section cross-reference(s): 75
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003106475	A2	20031224	WO 2003-EP6412	20030616
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2002102821	A1	20021227	WO 2002-GB2814	20020619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2002102822 A1 20021227 WO 2002-GB2841 20020619

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-388765P P 20020617

WO 2002-GB2814 A 20020619

WO 2002-GB2841 A 20020619

GB 2001-15178 A 20010620

AB The present invention relates to an improved process for the preparation of polymorph heterocyclyl substituted adenosine derivs. More particularly the invention is concerned with preparation of particular phys. forms of (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluoro-phenylamino)-9H-purin-9-yl]-tetrahydro-furan-3,4-diol.

ST heterocyclyl adenosine prepn crystn polymorphism oxadiazolylchlorofluorophenylaminopurinyl tetrahydrofurandiol nucleoside

IT Crystallization
(process for the preparation and crystallization of polymorph heterocyclyl substituted adenosine derivative)

IT Polymorphism (crystal)
(process for the preparation and purification of polymorph heterocyclyl substituted adenosine derivative)

IT 253124-46-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(process for the preparation and purification of polymorph heterocyclyl substituted adenosine derivative)

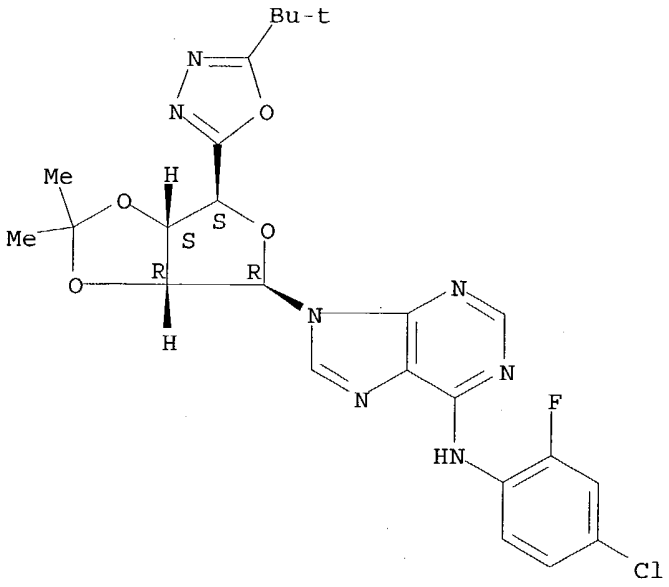
IT **253127-02-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for the preparation and purification of polymorph heterocyclyl substituted adenosine derivative)

IT **253127-02-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for the preparation and purification of polymorph heterocyclyl substituted adenosine derivative)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 4 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:883605 HCAPLUS
DN 140:87063
ED Entered STN: 11 Nov 2003
TI Structures of P. falciparum PfPK5 Test the CDK Regulation Paradigm and Suggest Mechanisms of Small Molecule Inhibition
AU Holton, Simon; Merckx, Anais; Burgess, Darren; Doerig, Christian; Noble, Martin; Endicott, Jane
CS Department of Biochemistry, Laboratory of Molecular Biophysics, Oxford, OX1 3QU, UK
SO Structure (Cambridge, MA, United States) (2003), 11(11), 1329-1337
CODEN: STRUE6; ISSN: 0969-2126
PB Cell Press
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 7, 10, 75
AB Plasmodium falciparum cell cycle regulators are promising targets for antimalarial drug design. We have determined the structure of PfPK5, the first structure of a P. falciparum protein kinase and the first of a cyclin-dependent kinase (CDK) not derived from humans. The fold and the mechanism of inactivation of monomeric CDKs are highly conserved across evolution. ATP-competitive CDK inhibitors have been developed as potential leads for cancer therapeutics. These studies have identified regions of the CDK active site that can be exploited to achieve significant gains in inhibitor potency and selectivity. We have cocrystd. PfPK5 with three inhibitors that target such regions. The sequence differences between PfPK5 and human CDKs within these inhibitor binding sites suggest that selective inhibition is an attainable goal. Such compds. will be useful tools for P. falciparum cell cycle studies, and will provide lead compds. for antimalarial drug development.
ST Plasmodium falciparum protein kinase crystal structure conformation inhibitor design; antimalarial PfPK5 complex crystal structure CDK homol enzyme inhibitionkinetics; active site PfPK5 binding mode indirubin purvalanol NU6102 modeling

IT Gene, microbial
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(CDC28; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Enzyme functional sites
(active; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Gene, microbial
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(cdc2; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Structure-activity relationship
(enzyme-inhibiting; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Protein sequences
(homol.; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Evolution
(mol.; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Crystal structure
(of PfPK5, PfPK5/NU6102, PfPK5/Indirubin-5-sulfonate, PfPK5 PruvalanolB; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Enzyme kinetics
(of inhibition; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Conformation
(protein; structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT Antimalarials
Drug design
Human
Malaria
Molecular modeling
Molecular recognition
Plasmodium falciparum
(structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT 56-65-5, 5'-ATP, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT 62996-74-1, Staurosporine 160807-49-8 **212844-54-7D**, Purvalanol B, PfPK5 complexes, crystal structure of 331467-05-1 444722-95-6D, NU6102, PfPK5 complexes, crystal structure of 478283-10-2D, PfPK5 complexes, crystal structure of
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
IT 140093-47-6 141349-86-2, Cyclin dependent kinase 2 147014-96-8, Cyclin dependent kinase 5 303014-92-8, Cyclin dependent kinase 6
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD

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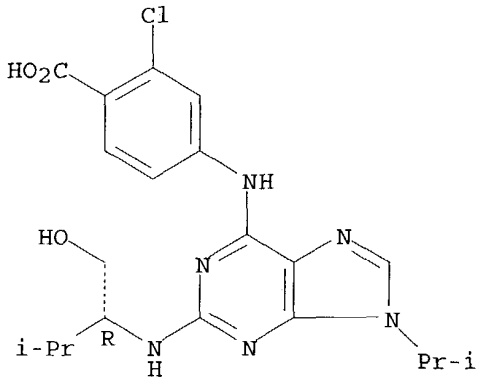
IT **212844-54-7D**, Purvalanol B, PfPK5 complexes, crystal structure of
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(structures of P. falciparum PfPK5 test CDK regulation paradigm and suggest mechanisms of small mol. inhibition)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 5 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:796530 HCAPLUS
DN 139:271043
ED Entered STN: 10 Oct 2003
TI Combination comprising a cyclin-dependent kinase (CDK) inhibitor and doxorubicin for use in the treatment of proliferative disorders
IN Sleigh, Roger Neil; Berns, Anton; Coley, Helen Mary; Lyons, Scott
PA Cyclacel Limited, UK
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K045-06
ICS A61K031-704; A61P035-00
CC 1-6 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003082337	A1	20031009	WO 2003-GB1282	20030325

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI GB 2002-7228 A 20020327
GB 2002-22408 A 20020926
GB 2002-25876 A 20021106

AB A first aspect of the invention relates to a combination comprising a CDK inhibitor (e.g. roscovitine) and doxorubicin. A second aspect of the invention relates to a pharmaceutical product comprising a CDK inhibitor and doxorubicin as a combined preparation for simultaneous, sequential or sep. use in therapy. A third aspect of the invention relates to a method of treating a proliferative disorder (e.g. cancer), said method comprising simultaneously, sequentially or sep. administering a CDK inhibitor and doxorubicin to a subject.
ST cyclin dependent kinase inhibitor doxorubicin combination

antiproliferative antitumor; roscovitine doxorubicin combination proliferative disorder cancer treatment

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A; cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(RB1; cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Antitumor agents
Cell cycle
Cytotoxic agents
Drug delivery systems
Neoplasm
Pituitary gland, neoplasm
(cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Anthracyclines
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Disease, animal
(proliferative; cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Eye, neoplasm
(retinoblastoma, retinoblastoma-dependent sporadic cancer; cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT Drug interactions
(synergistic; cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT 141349-86-2, CDK2 kinase 147014-97-9, CDK4 kinase 150428-23-2, Cyclin-dependent kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

IT 23214-92-8, Doxorubicin 101622-51-9, Olomoucine 186692-46-6, Roscovitine 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

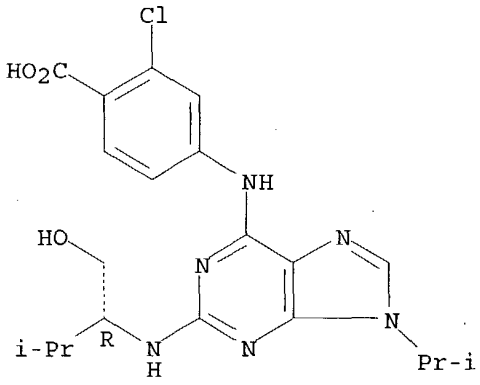
(1) Bristol-Myers Asquibb; WO 0244174 A 2002 HCAPLUS
(2) Bristol-Myers Squibb; WO 0246182 A 2002 HCAPLUS
(3) Coley, H; EUROPEAN JOURNAL OF CANCER 2002, V38, PS111
(4) LI, W; CANCER RESEARCH 2001, V61(6), P2579 HCAPLUS

IT **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin-dependent kinase inhibitor-doxorubicin combination for treatment of proliferative disorders)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 6 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:777226 HCAPLUS
DN 139:273221
ED Entered STN: 03 Oct 2003
TI Phage display affinity filter and forward screen
IN Lockhart, David J.; Treiber, Daniel Kelly; Zarrinkar, Patrick Parvis
PA USA
SO U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-70
ICS C12Q001-68
NCL 435005000; 435006000
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 1, 3
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003186221	A1	20031002	US 2002-115442	20020402
	WO 2003084981	A2	20031016	WO 2003-US10247	20030402
	WO 2003084981	A3	20031218		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	US 2004009470	A1	20040115	US 2003-406797	20030402
PRAI	US 2002-115442	A	20020402		

AB The invention provides an affinity filter for the binding of phage-displayed proteins to dissolved target mols. The phage-displayed proteins are contacted with immobilized target in the presence and absence of dissolved target; the behavior of the phage-displayed proteins as a function of concentration of dissolved target permits approximation of the affinity of

the phage-displayed protein for target. The invention also provides a method to screen large nos. of compds. for their ability to compete with a compound known to bind a phage-displayed protein. DHFR was spiked into a human colon phage cDNA library at a level of 1:105. The library was probed with immobilized methotrexate. After three rounds of selection in the absence of dissolved methotrexate, DHFR was the exclusive species isolated. In the presence of 10 μM methotrexate, however, the high affinity binder DHFR was no longer apparent, and a new clone (KIAA0663) predominated that was not observed in the absence of dissolved methotrexate. At the higher concentration of 100 μM methotrexate, neither KIAA0663 nor DHFR was present, indicating that both are true positives.

ST phage display affinity filter forward screen binding; immobilized methotrexate binding protein detn filter; dihydrofolate reductase KIAA063 binding methotrexate filter

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), 1, rapamycin effect on FK506 binding to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), 2, rapamycin effect on FK506 binding to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), 4, rapamycin effect on FK506 binding to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Immunophilins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP (FK 506-binding protein), rapamycin effect on FK506 binding to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(KIAA0663, methotrexate dissociation from, determination of Kd for; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(PMVK, dissociation from immobilized ATP, determination of Kd for; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Protein motifs
(SHC PTB domain, trkA-PY490 phosphopeptide as bait and affinity filter to select phage displaying; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

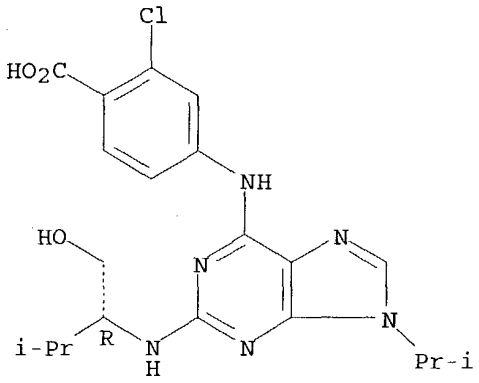
IT Neurotrophic factor receptors
RL: BSU (Biological study, unclassified); NUU (Other use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(TrkA, PY490 phosphopeptide, as bait and affinity filter to select phage displaying SHC PTB domain; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Drugs
(as targets; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

IT Peptides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(as targets; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Brain
(cDNA library of human; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Intestine
(colon; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Dissociation constant
(of phage-displayed protein and dissolved target, determination of; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Affinity
Fluids
High throughput screening
Human
Immobilization, molecular or cellular
Molecular association
Mutagenesis
Phage display
Phage display library
Samples
cDNA library
(phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Proteins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BIOL (Biological study); PREP (Preparation)
(phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT Phosphopeptides
RL: BSU (Biological study, unclassified); NUU (Other use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(trkA-PY490, as bait and affinity filter to select phage displaying SHC PTB domain; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 53123-88-9, Rapamycin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(FKBP proteins binding response to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT **212844-54-7**, Purvalanol B
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of CDK2 kinase and immobilized purvalanol in
presence of; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT **212844-54-7D**, Purvalanol B, immobilized
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of CDK2 kinase and, in presence of free purvalanol; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 165245-96-5, p38 MAP kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of immobilized SB202190 and, in presence of free
SB202190; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

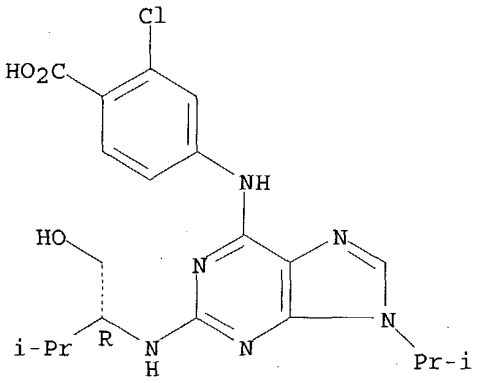
IT 141349-86-2, CDK2 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of immobilized purvalanol and, in presence of
free purvalanol; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 152121-30-7, SB202190
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of p38 MAP kinase and immobilized SB202190 in
presence of; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 152121-30-7D, SB202190, immobilized
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of p38 MAP kinase and, in presence of free
SB202190; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 208260-29-1, ZM336372
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(binding to p38 MAP kinase; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT 59-05-2, Methotrexate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dissociation from dihydrofolate reductase, determination of Kd for; phage display
affinity filter and forward screen using immobilized and dissolved target mols.)
IT 56-65-5D, 5'-ATP, immobilized
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(dissociation from protein PMVK, determination of Kd for; phage display affinity
filter and forward screen using immobilized and dissolved target mols.)
IT 9002-03-3, Dihydrofolate reductase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(methotrexate dissociation from, determination of Kd for; phage display affinity
filter and forward screen using immobilized and dissolved target mols.)
IT 104987-11-3D, FK506, immobilized
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(rapamycin effect on FKBP proteins binding to; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
IT **212844-54-7**, Purvalanol B
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of CDK2 kinase and immobilized purvalanol in
presence of; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, immobilized
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Kd determination for dissociation of CDK2 kinase and, in presence of free purvalanol; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 7 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:757564 HCAPLUS
DN 139:255338
ED Entered STN: 26 Sep 2003
TI Combination of a CDK inhibitor and 5-FU for the treatment of cancer
IN Green, Simon Richard; Fleming, Ian Neil; Clarke, Rosemary Georgina; McClue, Steven James
PA Cyclacel Limited, UK
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61P035-00
ICS A61K031-506; A61K031-513; A61K031-519

CC 1-6 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003077999	A1	20030925	WO 2003-GB1076	20030314

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI GB 2002-6203 A 20020315
GB 2003-295 A 20030107

AB A first aspect of the invention relates to a combination comprising a CDK inhibitor (e.g. roscovitine) and 5-FU, or a prodrug thereof. A second aspect of the invention relates to a pharmaceutical product comprising a CDK inhibitor and 5-FU, or a prodrug thereof, as a combined preparation for simultaneous, sequential or sep. use in therapy. A third aspect of the invention relates to a method of treating a proliferative disorder, the method comprising simultaneously, sequentially, or sep. administering a CDK inhibitor and 5-FU, or a prodrug thereof, to a subject.

ST CDK inhibitor fluorouracil combination cancer treatment; roscovitine fluorouracil combination cancer treatment

IT Antitumor agents
Apoptosis
Cell cycle
Cytotoxic agents
Drug delivery systems
Human
Mammary gland, neoplasm
Neoplasm
(CDK combination with 5-FU for treatment of cancer)

IT Drug interactions
(additive; CDK combination with 5-FU for treatment of cancer)

IT Intestine, neoplasm
(colorectal carcinoma, HT29; CDK combination with 5-FU for treatment of cancer)

IT Disease, animal
(proliferative; CDK combination with 5-FU for treatment of cancer)

IT Drug interactions
(synergistic; CDK combination with 5-FU for treatment of cancer)

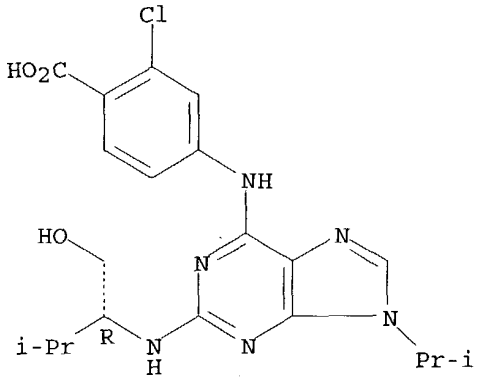
IT 141349-86-2, Cdk2 kinase 147014-97-9, Cdk4 kinase 150428-23-2, CDK kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CDK combination with 5-FU for treatment of cancer)

IT 51-21-8, 5-Fluorouracil 51-21-8D, 5-Fluorouracil, prodrug derivs. 101622-51-9, Olomoucine 154361-50-9, Capecitabine 186692-46-6, Roscovitine 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CDK combination with 5-FU for treatment of cancer)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Gali-Muhtasib; CURRENT CANCER DRUG TARGETS 2002, V2(4), P309 HCAPLUS
IT **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CDK combination with 5-FU for treatment of cancer)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 8 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:413956 HCAPLUS
DN 138:396187
ED Entered STN: 30 May 2003
TI Combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens
IN Schaffer, Priscilla A.; Schang, Luis M.
PA USA
SO U.S. Pat. Appl. Publ., 76 pp., Cont.-in-part of U.S. Ser. No. 951,058.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-522
ICS A61K031-52; C12Q001-70; C12Q001-68; A61K039-12; A01N043-90
NCL 435006000; 514263380; 514263400; 435005000; 424204100
CC 1-5 (Pharmacology)
Section cross-reference(s): 10, 63
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003099944	A1	20030529	US 2000-905687	20001206
	WO 2000006170	A1	20000210	WO 1999-US16252	19990716
	W: AU, CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1998-94805P	P	19980731		
	US 1999-131264P	P	19990427		
	US 1999-140926P	P	19990624		
	WO 1999-US16252	A1	19990716		
	US 2000-656592	A2	20000907		

US 2000-951058 A2 20000912

AB The invention relates to the identification of cdk inhibitors as inhibitors of pathogen gene expression, replication and reactivation. The invention also relates to the identification of a combination therapy to inhibit pathogen replication in which a drug that inhibits pathogen replication by targeting a specific pathogen-encoded protein is administered in combination with a drug that inhibits pathogen replication by targeting host-encoded cdk proteins. Compns. and assays for the identification and use of such inhibitors are provided as are methods of use of the inhibitors. Vero cells (mammalian cell line) were infected with 3 PFUs of either a wild-type or an antiviral drug-resistant strain of HSV-1. One hour after infection, cultures were washed with PBS and then refed with medium containing acyclovir (ACV) and with cellular cyclin-dependent kinase inhibitors Roscovitine (Rosco) or Purvalanol (Purv). The effects of either Rosco or Purv on inhibiting viral replication, when used in combination with ACV, were greater than when either Rosco or Purv were used alone. Importantly, the increased effects of Rosco and Purv were observed during treatment of ACV-susceptible wild-type HSV-1 (KOS) and during treatment of an ACV-resistant strain (TK-) of HSV-1.

ST pathogen inhibition combination drug target cellular protein; cyclin dependent kinase inhibitor combination pathogen; purvalanol acyclovir inhibition human herpesvirus 1; cdk inhibitor roscovitine inhibition HSV1 replication

IT Animal cell line
(CEMX174, cdk inhibitor inhibition of HIV replication in; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(EA (early antigen), cdk inhibitors inhibition of expression of HSV-1; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Animal cell line
(HEL, inhibition of HSV replication in; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Animal cell line
(Vero, inhibition of HSV replication in; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Drug interactions
(additive; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Cell cycle
(and HSV replication; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Drug delivery systems
(buccal; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Antibacterial agents
Antimicrobial agents
Antiviral agents
Fungicides
Human

Mammalia
Parasiticides
(combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Eye, disease
(herpetic keratitis, roscovitine inhibition of HSV-1 replication in; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immediate-early, cdk inhibitors inhibition of expression of HSV-1; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Nucleoside analogs
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibiting pathogen replication; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Drug resistance
(inhibition of HSV-1 strain having; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Bacteria (Eubacteria)
Fungi
Parasite
Pathogen
Virus
(inhibition of; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Bovine herpesvirus 1
Cytomegalovirus
Equid herpesvirus 1
Hepatitis B virus
Hepatitis C virus
Herpesviridae
Human T-lymphotropic virus
Human herpesvirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 6
Human herpesvirus 7
Human herpesvirus 8
Human immunodeficiency virus
Human immunodeficiency virus 1
Human papillomavirus
Pseudorabies virus
(inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Drug delivery systems
(intrathecal; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT Drug delivery systems
(nasal; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Post-transcriptional processing
Post-translational processing
Transcription, genetic
Translation, genetic
(of pathogen, inhibition of; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of pathogen, inhibition of; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(ophthalmic; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(oral; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(parenterals; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(pulmonary; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(rectal; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT DNA formation
(replication, of pathogen, inhibition of; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(topical; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Ganglion
(trigeminal, disease, infection, with HSV-1, prevention of; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT Drug delivery systems
(vaginal; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
IT 96-48-0, γ-Butyrolactone 145-63-1, Suramin 606-58-6, Toyocamycin 938-55-6, 6-Dimethylaminopurine 2365-40-4 51131-85-2, 9-Hydroxyellipticine 62996-74-1, Staurosporine 82005-12-7, Hymenialdisine 101622-51-9, Olomoucine 142273-20-9, Kenpaullone 146426-40-6, Flavopiridol 160807-49-8 164658-13-3, CGP60474 186692-46-6, Roscovitine 199986-75-9, CVT-313 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 237430-03-4, Alsterpaullone

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cdk inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT 141349-86-2, Cyclin-dependent kinase-2 143375-65-9, Cyclin-dependent kinase-1 147014-96-8, Cyclin-dependent kinase-5
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibition; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT 150428-23-2, Cyclin-dependent kinase
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT 70-00-8, Trifluorothymidine 3056-17-5, Stavudine 30516-87-1, Azidothymidine 59277-89-3, Acyclovir 69655-05-6, Dideoxyinosine 104227-87-4, Famciclovir 124832-26-4, Valacyclovir 134678-17-4, Lamivudine 136470-78-5, Abacavir
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pathogen DNA replication inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

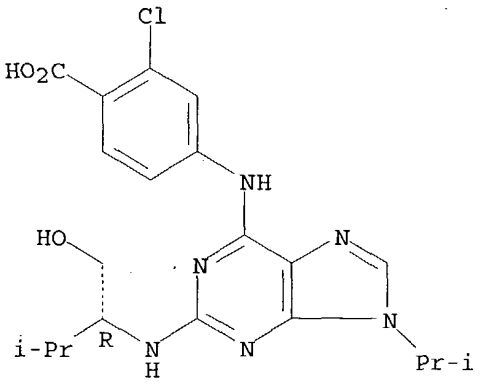
IT 9001-92-7, Protease
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(protease, inhibitors; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

IT **212844-54-7**, Purvalanol B
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cdk inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 9 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:273687 HCAPLUS
DN 139:127415
ED Entered STN: 09 Apr 2003
TI Discovery of a Novel Family of CDK Inhibitors with the Program LIDAEUS Structural Basis for Ligand-Induced Disordering of the Activation Loop
AU Wu, Su Ying; McNae, Iain; Kontopidis, George; McClue, Steven J.; McInnes, Campbell; Stewart, Kevin J.; Wang, Shudong; Zheleva, Daniella I.; Marriage, Howard; Lane, David P.; Taylor, Paul; Fischer, Peter M.; Walkinshaw, Malcolm D.
CS Structural Biochemistry Group, The University of Edinburgh, Edinburgh, EH9 3JR, UK
SO Structure (Cambridge, MA, United States) (2003), 11(4), 399-410
CODEN: STRUE6; ISSN: 0969-2126
PB Cell Press
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 7, 75
OS CASREACT 139:127415
AB A family of 4-heteroaryl-2-amino-pyrimidine CDK2 inhibitor lead compds. was discovered with the new database-mining program LIDAEUS through in silico screening. Four compds. with IC50 values ranging from 17 to 0.9 μM were selected for x-ray crystal anal. Two distinct binding modes are observed, one of which resembles the hydrogen bonding pattern of bound ATP. In the second binding mode, the ligands trigger a conformational change in the activation T loop by inducing movement of Lys33 and Asp145 side chains. The family of mols. discovered provides an excellent starting point for the design and synthesis of tight binding inhibitors, which may lead to a new class of antiproliferative drugs.
ST CDK2 inhibitor design screening LIDAEUS enzyme active site docking; antitumor enzyme inhibiting structure protein loop conformation; arylaminothiazolopyrimidine prep aminothiazolopyrimidine anticancer enzyme ligand inhibitor crystal structure
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B1; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT Antitumor agents
Crystal structure
Drug design
Drug screening
Human
Kinetic energy
Molecular association
Molecular structure
Pharmacophores
Van der Waals potential
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT Hydrogen bond
(CDK inhibitors discovery using LIDAEUS structural basis for ligand-induced disordering of activation loop)
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT Cyclins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E, complexed with CDK2; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Enzyme functional sites
(active; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Kidney, neoplasm
Mammary gland, neoplasm
Ovary, neoplasm
(adenocarcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Bronchi, neoplasm
Lung, neoplasm
Pancreas, neoplasm
Prostate gland, neoplasm
Uterus, neoplasm
(carcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Intestine, neoplasm
(colorectal adenocarcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Mammary gland, neoplasm
(ductal carcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Uterus, neoplasm
(endometrium, carcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Structure-activity relationship
(enzyme-inhibiting; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Liver, neoplasm
(hepatoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Enzyme functional sites
(ligand-binding; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Conformation
(loop, protein, T loop; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Electron density
(map; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Kidney, neoplasm
(renal cell carcinoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Uterus, neoplasm
(sarcoma; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

IT Information systems
(searching, LIDAEUS; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation

loop)
IT Crystallography
(x-ray; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 56-65-5, 5'-ATP, biological studies 147014-97-9, CDK4 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 566149-74-4P
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT **212844-54-7**, Purvalanol b 364334-94-1
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 62996-74-1, Staurosporine 82005-12-7, Hymenialdisine 146426-40-6, Flavopiridol 161058-83-9, NU 2058 186692-46-6, Roscovitine 211555-08-7 222035-13-4 240819-90-3, H 717 244021-67-8 322683-09-0 364333-96-0 566149-75-5 568550-28-7, OL 567
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PRP (Properties); BIOL (Biological study)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 146279-89-2, CDK2 kinase (cyclin E) 364333-96-0D, complexed with CDK2 364334-94-1D, complexed with CDK2 566149-73-3D, complexed with CDK2 566149-74-4D, complexed with CDK2
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 455-14-1, 4-(Trifluoromethyl)aniline 1188-33-6, N,N-Dimethylformamide diethylacetal 38205-60-6, 5-Acetyl-2,4-dimethylthiazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
IT 566149-73-3
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CDK inhibitors discovery using LIDAEUS structural basis for ligand-induced disordering of activation loop)
IT 143375-65-9, CDK1 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(complexed with cyclin B1; CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)
RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
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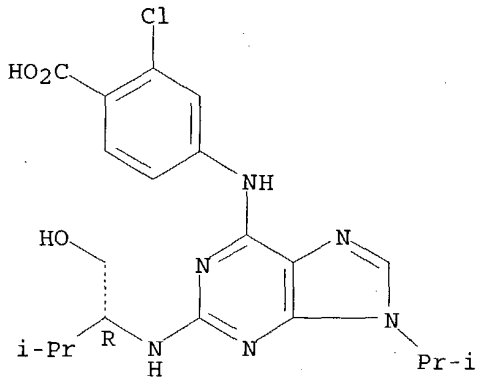
IT **212844-54-7**, Purvalanol b
RL: BSU (Biological study, unclassified); DMA (Drug mechanism of action); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CDK inhibitors discovery using LIDAEUS program detailing structural basis for ligand-induced disordering of activation loop)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 10 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:241996 HCAPLUS
DN 138:248486
ED Entered STN: 28 Mar 2003
TI Cellular proteins as targets for the treatment of pathogens resistant to drugs that target pathogen-encoded proteins, and use of cdk inhibitors
IN Schaffer, Priscilla A.; Schang, Luis M.
PA USA
SO U.S. Pat. Appl. Publ., 75 pp., Cont.-in-part of U.S. Ser. No. 951,058.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-553
ICS A61K031-52; A61K031-4745; A61K031-365; A61K031-404; A61K031-255
NCL 514211080; 514263400; 514456000; 514473000; 514414000; 514285000; 514518000
CC 1-5 (Pharmacology)
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003060457	A1	20030327	US 2000-905695	20001206
	WO 2000006170	A1	20000210	WO 1999-US16252	19990716
	W: AU, CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1998-94805P	P	19980731		
	US 1999-131264P	P	19990427		
	US 1999-140926P	P	19990624		
	WO 1999-US16252	A1	19990716		
	US 2000-656592	A2	20000907		
	US 2000-951058	A2	20000912		

AB The invention relates to the identification of cdk inhibitors as inhibitors of gene expression, replication and reactivation in pathogenic agents. Compns. and assays for the identification and use of such inhibitors are provided, as are methods of use of the inhibitors.
ST cdk inhibitor pathogen infection treatment; drug resistance pathogen protein target cdk inhibitor
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B1; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP0; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP22 (infected-cell protein 22); cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP4; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP8; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IE63 (immediate-early, 63 kDa); cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TK (thymidine kinase); cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Drug resistance
(antiviral; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT Drug delivery systems
(buccal; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
IT AIDS (disease)
Anti-AIDS agents
Antibacterial agents
Antiviral agents
Bactericide resistance
Bovine herpesvirus 1
Cell cycle
Cytomegalovirus
Drug resistance
Drug targets
Equid herpesvirus 1
Fungicide resistance

Fungicides
Hepatitis B virus
Hepatitis C virus
Human
Human T-lymphotropic virus
Human herpesvirus
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 6
Human herpesvirus 7
Human herpesvirus 8
Human immunodeficiency virus
Human papillomavirus
Parasiticides
Pathogen
Pseudorabies virus
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Bacteria (Eubacteria)
Fungi
Parasite
Virus
Yeast
(drug-resistant; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(early; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gC; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Eye, disease
(herpetic keratitis; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immediate early; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(intrathecal; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(late; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems

(nasal; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(ophthalmic; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(oral; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(parenterals; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(pulmonary; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(rectal; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Antiviral agents
(resistance to; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Anti-inflammatory agents
(stromal keratitis; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(topical; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Ganglion
(trigeminal, disease, infection; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT Drug delivery systems
(vaginal; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT 9012-90-2, DNA polymerase 9026-43-1, Serine/threonine kinase 137632-07-6, Erk-1 kinase 137632-08-7, Erk-2 kinase 141349-86-2, Cdk2 kinase 143375-65-9, Cdk1 kinase 147014-96-8, Cdk5 kinase 153190-71-7, Cdk3 kinase 330197-29-0, Cdk7 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT 186692-46-6, Roscovitine
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT 66-81-9, Cycloheximide 4408-78-0, Phosphonoacetic acid 75330-75-5, Lovastatin 99533-80-9, K252a 101622-50-8, Isoolomoucine 167869-21-8, PD98059
RL: PAC (Pharmacological activity); BIOL (Biological study)
(cellular proteins as targets for treatment of pathogens resistant to

drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT 96-48-0, γ-Butyrolactone 145-63-1, Suramin 606-58-6, Toyocamycin 938-55-6, 6-Dimethylaminopurine 2365-40-4 51131-85-2, 9-Hydroxyellipticine 59277-89-3, Acycloguanosine 62996-74-1, Staurosporine 82005-12-7, Hymenialdisine 101622-51-9, Olomoucine 142273-20-9, Kenpaullone 146426-40-6, Flavopiridol 160807-49-8 164658-13-3, CGP60474 199986-75-9, CVT-313 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 237430-03-4, Alsterpaullone
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

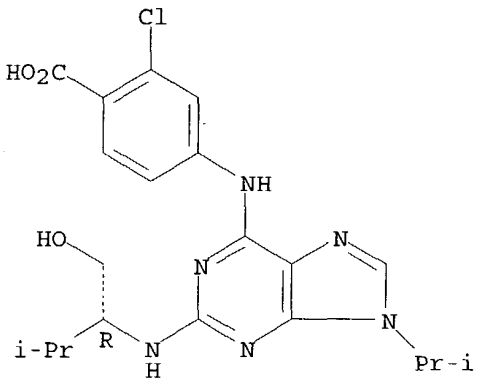
IT 150428-23-2, Cdk kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

IT **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 11 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:27417 HCAPLUS

DN 139:166

ED Entered STN: 13 Jan 2003

TI Chemical and biological profile of dual Cdk1 and Cdk2 inhibitors

AU Ruetz, Stephan; Fabbro, Doriano; Zimmermann, Juerg; Meyer, Thomas; Gray, Nathanael

CS Department of Oncology, Novartis Pharma Inc., Basel, CH-4002, Switz.

SO Current Medicinal Chemistry: Anti-Cancer Agents (2003), 3(1), 1-14
CODEN: CMCACI; ISSN: 1568-0118

PB Bentham Science Publishers Ltd.

DT Journal; General Review

LA English

CC 1-0 (Pharmacology)

AB A review. The importance of Cdks in cell cycle regulation, their interaction with oncogenes and tumor suppressors, and their frequent deregulation in human tumors, has encouraged an active search for agents capable of perturbing the function of Cdks. In our labs., a variety of selective and potent low mol. weight inhibitors directed against the ATP binding sites of the Cdk1, Cdk2 have been developed. Extensive biol. profiling of two distinct classes of Cdk inhibitors - the phenylamino pyrimidines (PAPs) and trisubstituted purines has revealed distinct differences in their cellular effects in normal cells compared to tumor cells. Due to their intact G1/S checkpoints, normal cells are shown to be reversibly blocked by these Cdk inhibitors in either the G1/S-phase or at the G2/M boarder. In transformed cells these control points are either absent or defective and treatment with the compds. resulted in pronounced proliferation block at the G2/M transition. Furthermore, there is strong evidence that this G2/M arrest is less well tolerated by the cells and consequently, they undergo apoptotic cell death. Finally, these dual Cdk1/ Cdk2 inhibitors are also significantly more active on proliferating cells compared to quiescent cells reflecting their specific activity. Despite these encouraging results demonstrating a distinct outcome after treatment with such dual Cdk inhibitors in normal compared to de-regulated tumor cells, it remains to be determined whether a comparable therapeutic window might be observed in vivo expts. Furthermore the intracellular kinase selectivity of inhibitors which are putatively selective in vitro remains a complicating feature that is only recently begun to be addressed by affinity chromatog. and phospho-proteomics techniques. Once efficacy can be demonstrated in animal models at well-tolerated doses, there will be strong evidence for the development of cell cycle antagonists for cancer therapy.

ST review Cdk1 Cdk2 inhibitor antitumor human cell cycle

IT Antitumor agents
Apoptosis
Cell cycle
Human
Neoplasm
(chemical and biol. profile of dual Cdk1 and Cdk2 inhibitors)

IT 141349-86-2, Cyclin-dependent kinase 2 143375-65-9, Cyclin-dependent kinase 1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chemical and biol. profile of dual Cdk1 and Cdk2 inhibitors)

IT 101622-51-9, Olomoucine 164658-13-3, CGP60474 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 220792-57-4, Aminopurvalanol A
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemical and biol. profile of dual Cdk1 and Cdk2 inhibitors)

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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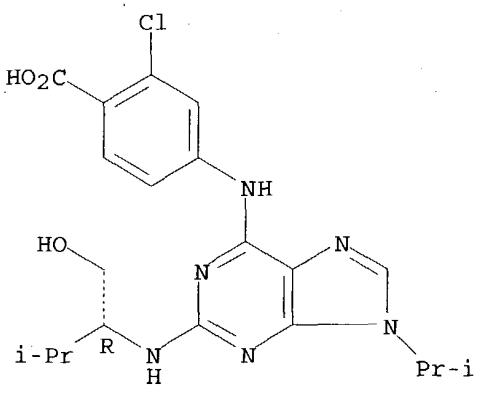
IT **212844-54-7**, Purvalanol B
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemical and biol. profile of dual Cdk1 and Cdk2 inhibitors)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

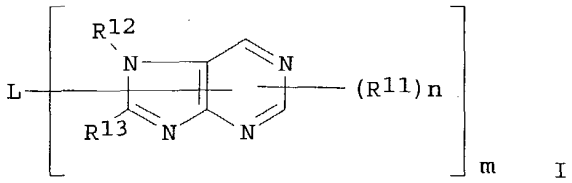
Absolute stereochemistry.



L31 ANSWER 12 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:900820 HCAPLUS
DN 137:390864
ED Entered STN: 27 Nov 2002
TI Electroluminescent devices with good storage stability and brightness, and compounds having multiple purine structures for them
IN Kimura, Keizo
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 44 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07D519-00
ICS C09K011-06; H05B033-14; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002338579	A2	20021127	JP 2001-325594	20011023
	US 2003072965	A1	20030417	US 2002-97607	20020315
PRAI	JP 2001-76704	A	20010316		
	JP 2001-325594	A	20011023		

OS MARPAT 137:390864
GI



I

AB The device contains purine-based compds. I (R11 = substituent; R12 = H, aliphatic hydrocarbyl, aryl, hetero ring group; R13 = H, substituent; L = single bond, linking group; n = 0-2; m ≥2) in light-emitting layers.
ST purine charge transfer electroluminescent device; storage stability EL device purine host
IT Electroluminescent devices
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 476169-79-6 476169-80-9 476169-81-0 476169-82-1 476169-83-2 476169-84-3 476169-85-4 476169-86-5 476169-87-6 476169-88-7 476169-89-8 **476169-90-1**
RL: DEV (Device component use); USES (Uses)
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
IT 476169-66-1P 476169-68-3P 476169-70-7P 476169-72-9P 476169-74-1P 476169-76-3P 476169-77-4P 476169-78-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)

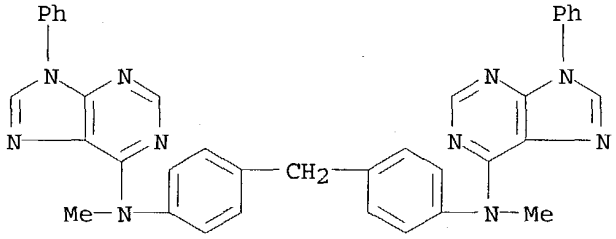
IT 1454-80-4P, [1,1'-Biphenyl]-2,2'-diamine 2346-74-9P 34890-62-5P
476169-67-2P 476169-69-4P 476169-71-8P 476169-73-0P 476169-75-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)

IT 80-05-7, Bisphenol A, reactions 87-42-3 95-80-7 106-50-3, 1,4-Diaminobenzene, reactions 107-14-2, Chloroacetonitrile 108-72-5, 1,3,5-Triaminobenzene 590-17-0, Bromoacetonitrile 615-71-4, 1,2,4-Triaminobenzene 2436-96-6 2716-10-1 3473-63-0, Formamidine acetate 27610-62-4 365564-05-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)

IT **476169-90-1**
RL: DEV (Device component use); USES (Uses)
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)

RN 476169-90-1 HCAPLUS

CN 9H-Purin-6-amine, N,N'-(methylenedi-4,1-phenylene)bis[N-methyl-9-phenyl- (9CI) (CA INDEX NAME)



L31 ANSWER 13 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:736265 HCAPLUS

DN 137:232865

ED Entered STN: 27 Sep 2002

TI Process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline

IN Berry, Malcolm; Roberts, John C.; Xie, Shiping

PA Glaxo Group Limited, UK

SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H019-16

CC 33-9 (Carbohydrates)
Section cross-reference(s): 1

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002074781	A1	20020926	WO 2002-GB1344	20020319

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,

TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1370569 A1 20031217 EP 2002-718299 20020319
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI GB 2001-6867 A 20010320
WO 2002-GB1344 W 20020319
OS CASREACT 137:232865; MARPAT 137:232865
AB An improved process for preparing N6-substituted aminopurine ribofuranose nucleosides. Compds. of this type are known to be useful in the preparation of compds. having activity at adenosine receptors, e.g., Adenosine A1 receptor (no data). The process comprises the step of condensation reaction of 6-halopurine ribofuranose nucleoside with an amine in the presence of CaCO3, wherein acid is added to the reaction mixture Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol was prepared in 74% yield by condensation of 9-[(3aR,4R,6S,6aS)-6-(5-tert-butyl-1,3,4-oxadiazol-2-yl)-2,2-dimethyltetrahydrofuro(3,4-d[1,3]dioxol-4-yl)]-6-chloro-9H-purine with 4-chloro-2-fluoroaniline.
ST aminopurine ribofuranose nucleoside prepn condensation halopurine chlorofluoroaniline
IT Condensation reaction
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
IT Nucleosides, preparation
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
IT **253127-02-5P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
IT 253124-46-8P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
IT 57946-56-2, 4-Chloro-2-fluoroaniline. 253126-44-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(3) David, J; WO 9924450 A 1999 HCAPLUS
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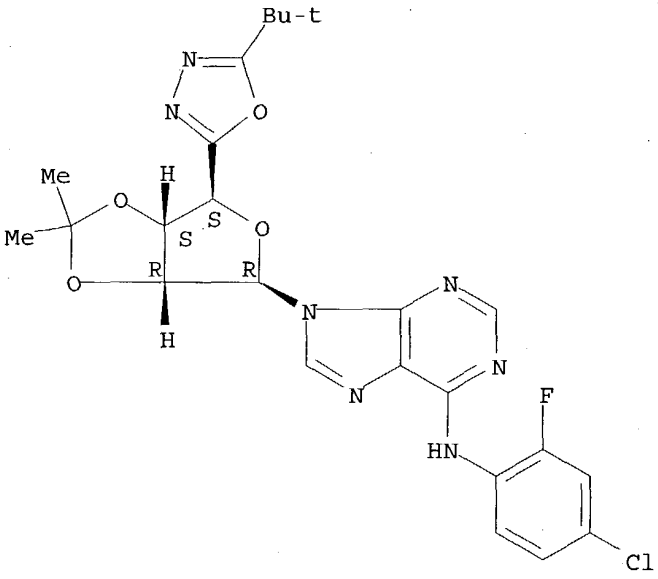
(15) Pennell, A; WO 9924451 A 1999 HCAPLUS
IT **253127-02-5P**
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(process for preparing N6-substituted aminopurine ribofuranose nucleosides via condensation reaction of halopurine with chlorofluoroaniline)
RN 253127-02-5 HCAPLUS
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 14 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:687941 HCAPLUS
DN 138:297174
ED Entered STN: 11 Sep 2002
TI p42/p44 MAPKs are intracellular targets of the CDK inhibitor purvalanol
AU Knockaert, Marie; Lenormand, Philippe; Gray, Nathanael; Schultz, Peter; Pouyssegur, Jacques; Meijer, Laurent
CS CNRS, Station Biologique de Roscoff, Bretagne, 29682, Fr.
SO Oncogene (2002), 21(42), 6413-6424
CODEN: ONCNES; ISSN: 0950-9232
PB Nature Publishing Group
DT Journal
LA English
CC 1-6 (Pharmacology)
AB Chemical inhibitors of cyclin-dependent kinases (CDKs) have a great therapeutic potential against various proliferative and neurodegenerative disorders. Intensive screening of a combinatorial chemical library of 2,6,9-trisubstituted purines has led to the identification of purvalanol, one of the most potent and selective CDK inhibitors to date. In preliminary studies, this compound demonstrates definite anti-mitotic properties, consistent with its nanomolar range efficiency towards

purified CDK1 and CDK2. However, the actual intracellular targets of purvalanol remain to be identified, and a method for the determination of its in vivo selectivity was developed. In this technique, cell exts. were screened for purvalanol-interacting proteins by affinity chromatog. on immobilized inhibitor. In addition to CDK1, p42/p44 MAPK were found to be two major purvalanol-interacting proteins in five different mammalian cell lines (CCL39, PC12, HBL100, MCF-7 and Jurkat cells), suggesting the generality of the purvalanol/p42/p44 MAPK interaction. The Chinese hamster lung fibroblast cell line CCL39 was used as a model to investigate the anti-proliferative properties of purvalanol. The compound inhibited cell growth with a GI50 value of 2.5 μM and induced a G2/M block when added to exponentially growing cells. It did not appear to trigger massive activation of caspase. We next tested whether CDKs and p42/p44 MAPK were actually targeted by the compound in vivo. P42/p44 MAPK activity was visualized using an Elk-Gal4 luciferase reporter system and CDK1 activity was detected by the phosphonucleolin level. When cells were treated with purvalanol, p42/p44 MAPK and CDK1 activities were inhibited in a dose-dependent manner. Furthermore, purvalanol inhibited the nuclear accumulation of p42/p44 MAPK, an event dependent on the catalytic activity of these kinases. We conclude that the anti-proliferative properties of purvalanol are mediated by inhibition of both p42/p44 MAPK and CDKs. These observations highlight the potency of moderate selectivity compds. and encourage the search for new therapeutics which simultaneously target distinct but relevant pathways of cell proliferation.

ST purvalanol proliferation inhibitor CDK MAP kinase

IT Antitumor agents
Cytotoxic agents
Drug targets
Human
(p42/p44 MAPKs and cyclin-dependent kinases are targets of proliferation inhibitor purvalanol)

IT 137632-07-6, p44 MAP kinase 137632-08-7, p42 MAP kinase 143375-65-9, CDK1 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(p42/p44 MAPKs and cyclin-dependent kinases are targets of proliferation inhibitor purvalanol)

IT 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 220792-57-4 244030-87-3 **289508-12-9**, Methylpurvalanol B 510754-71-9
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(p42/p44 MAPKs and cyclin-dependent kinases are targets of proliferation inhibitor purvalanol)

RE.CNT 89 THERE ARE 89 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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IT **212844-54-7**, Purvalanol B **289508-12-9**, Methylpurvalanol B

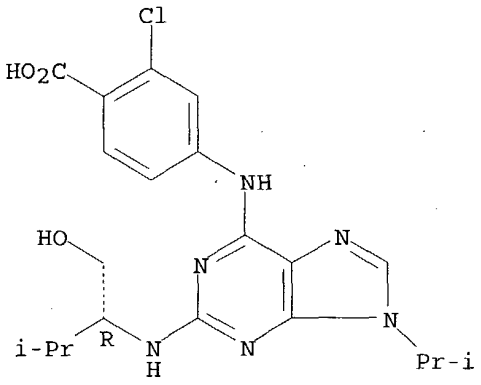
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(p42/p44 MAPKs and cyclin-dependent kinases are targets of proliferation inhibitor purvalanol)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

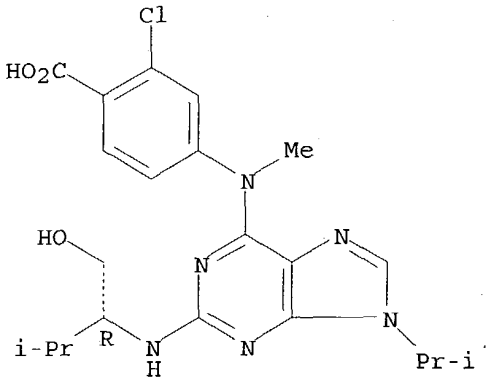
Absolute stereochemistry.



RN 289508-12-9 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]methylamino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 15 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:608900 HCAPLUS
DN 137:288504
ED Entered STN: 15 Aug 2002
TI Use of Catalyst Pharmacophore Models for Screening of Large Combinatorial Libraries
AU Hecker, Evan A.; Duraiswami, Chaya; Andrea, Tariq A.; Diller, David J.
CS Department of Molecular Modeling, Pharmacopeia Inc., Princeton, NJ, 08543-5350, USA
SO Journal of Chemical Information and Computer Sciences (2002), 42(5), 1204-1211
CODEN: JCISD8; ISSN: 0095-2338
PB American Chemical Society
DT Journal
LA English
CC 1-3 (Pharmacology)
AB Using a data set comprised of literature compds. and structure-activity data for cyclin dependent kinase 2, several pharmacophore hypotheses were generated using Catalyst and evaluated using several criteria. The two best were used in retrospective searches of 10 three-dimensional databases containing over 1 000 000 proprietary compds. The results were then analyzed for the efficiency with which the hypotheses performed in the areas of compound prioritization, library prioritization, and library design. First as a test of their compound prioritization capabilities, the pharmacophore models were used to search combinatorial libraries that were known to contain CDK active compds. to see if the pharmacophore models could selectively choose the active compds. over the inactive compds. Second as a test of their utility in library design again the pharmacophore models were used to search the active combinatorial libraries to see if the key synthons were over represented in the hits from the pharmacophore searches. Finally as a test of their ability to prioritize combinatorial libraries, several inactive libraries were searched in addition to the active libraries in order to see if the active libraries produced significantly more hits than the inactive libraries. For this study the pharmacophore models showed potential in all three areas. For compound prioritization, one of the models selected active compds. at a rate nearly 11 times that of random compound selection though in other cases models missed the active compds. entirely. For library design, most of the key fragments were over represented in the hits from at least one of the searches though again some key fragments were missed. Finally, for library prioritization, the two active libraries both produced a significant number of hits with both pharmacophore models, whereas none of the eight inactive libraries

produced a significant number of hits for both models.

ST cyclin dependent kinase inhibitor pharmacophore model combinatorial library; structure activity drug screening design pharmacophore mol modeling CDK

IT Protein sequences
(alignment; use of catalyst pharmacophore models for screening of large combinatorial libraries)

IT Structure-activity relationship
(enzyme-inhibiting; use of catalyst pharmacophore models for screening of large combinatorial libraries)

IT Combinatorial library
Computer application
Crystal structure
Databases
Drug design
Drug screening
Molecular modeling
Molecular structure
Pharmacophores
Synthons
(use of catalyst pharmacophore models for screening of large combinatorial libraries)

IT Cyclin dependent kinase inhibitors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(use of catalyst pharmacophore models for screening of large combinatorial libraries)

IT 141349-86-2, Cyclin dependent kinase 2 143375-65-9, Cyclin dependent kinase 1 147014-96-8, Cdk5 kinase 153190-71-7, Gene cdk3 protein kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(use of catalyst pharmacophore models for screening of large combinatorial libraries)

IT 101622-51-9 186692-45-5 190653-77-1 199986-70-4 199986-72-6
199986-74-8 199986-75-9 199986-90-8 199986-95-3 199987-12-7
199987-16-1 199987-28-5 199987-32-1 199987-51-4 199987-57-0
199987-63-8 199987-67-2 199987-71-8 199987-73-0 203436-34-4
212844-53-6 244231-67-2 **468058-44-8** 468058-45-9
468058-46-0 468058-47-1 468058-48-2 468058-49-3 468058-50-6
468058-51-7 468058-52-8 468058-53-9 468058-54-0 468058-55-1
468058-56-2
RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(use of catalyst pharmacophore models for screening of large combinatorial libraries)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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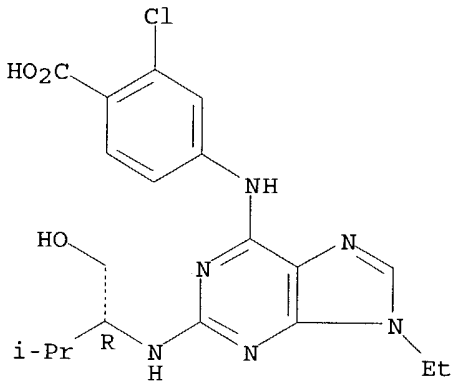
IT **468058-44-8**
RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(use of catalyst pharmacophore models for screening of large combinatorial libraries)
RN 468058-44-8 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[9-ethyl-2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 16 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:536938 HCAPLUS
DN 138:117269
ED Entered STN: 19 Jul 2002
TI Pharmacological cyclin-dependent kinase inhibitors inhibit replication of wild-type and drug-resistant strains of herpes simplex virus and human immunodeficiency virus type 1 by targeting cellular, not viral, proteins
AU Schang, Luis M.; Bantly, Andrew; Knockaert, Marie; Shaheen, Farida; Meijer, Laurent; Malim, Michael H.; Gray, Nathanael S.; Schaffer, Priscilla A.
CS University of Pennsylvania School of Medicine, Philadelphia, PA, USA
SO Journal of Virology (2002), 76(15), 7874-7882
CODEN: JOVIAM; ISSN: 0022-538X
PB American Society for Microbiology

DT Journal
LA English
CC 1-5 (Pharmacology)
Section cross-reference(s): 10
AB Pharmacol. cyclin-dependent kinase (cdk) inhibitors (PCIs) block replication of several viruses, including herpes simplex virus type 1 (HSV-1) and human immunodeficiency virus type 1 (HIV-1). Yet, these antiviral effects could result from inhibition of either cellular cdks or viral enzymes. For example, in addition to cellular cdks, PCIs could inhibit any of the herpesvirus-encoded kinases, DNA replication proteins, or proteins involved in nucleotide metabolism To address this issue, we asked whether purine-derived PCIs (P-PCIs) inhibit HSV and HIV-1 replication by targeting cellular or viral proteins. P-PCIs inhibited replication of HSV-1 and -2 and HIV-1, which require cellular cdks to replicate, but not vaccinia virus or lymphocytic choriomeningitis virus, which are not known to require cdks to replicate. P-PCIs also inhibited strains of HSV-1 and HIV-1 that are resistant to conventional antiviral drugs, which target viral proteins. In addition, the anti-HSV effects of P-PCIs and a conventional antiherpesvirus drug, acyclovir, were additive, demonstrating that the two drugs act by distinct mechanisms. Lastly, the spectrum of proteins that bound to P-PCIs in exts. of mock- and HSV-infected cells was the same. Based on these observations, we conclude that P-PCIs inhibit virus replication by targeting cellular, not viral, proteins.
ST cdk inhibitor herpesvirus HIV1 mechanism
IT Transcription, genetic
(HSV-1 gene; cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT Drug resistance
(antiviral; cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT Antiviral agents
Human
Human herpesvirus 1
Human herpesvirus 2
Human immunodeficiency virus 1
(cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT Antiviral agents
(resistance to; cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT 330197-29-0, Cyclin-dependent kinase 7 403652-37-9
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT 186692-46-6, Roscovitine 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
IT 59277-89-3, Acyclovir
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)
RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
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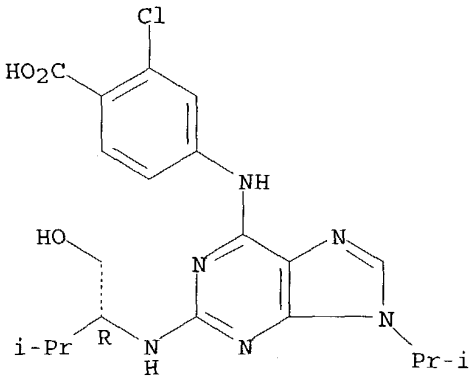
IT **212844-54-7**, Purvalanol B
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cdk inhibitors Roscovitine and Purvalanol inhibit HSV-1 and -2 and HIV-1 replication by targeting cellular, not viral, proteins)

RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 17 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:521407 HCAPLUS
DN 137:73237
ED Entered STN: 12 Jul 2002
TI Single and combination therapy using drugs with target cellular proteins and drugs which target pathogen-encoded proteins
IN Schaffer, Priscilla A.; Schang, Luis M.
PA The Trustees of the University of Pennsylvania, USA
SO PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 1-5 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002053096	A2	20020711	WO 2001-US47257	20011206
	WO 2002053096	A3	20030130		

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRAI US 2000-251623P P 20001206
US 2000-251653P P 20001206

AB The invention relates to the identification of cdk inhibitors as inhibitors of pathogen gene expression, replication and reactivation. The invention also relates to the identification of a combination therapy to inhibit pathogen replication in which a drug that inhibits pathogen replication by targeting a specific pathogen-encoded protein is administered in combination with a drug that inhibits pathogen replication by targeting host-encoded cdk proteins. Compns. and assays for the identification and use of such inhibitors are provided as are methods of use of the inhibitors.
ST pathogen infection treatment cdk inhibitor combination; protein pathogen infection treatment cdk inhibitor combination
IT Cyclins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B1; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Animal cell line
(CEMX174; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GAPDH; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Animal cell line
(HEL; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP0; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP22; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP27; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP4; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICP8; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Animal cell line
(Vero; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Translation, genetic
(and protein processing and activity; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Drug delivery systems
(buccal; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Anti-AIDS agents
Anti-infective agents
Antibacterial agents
Antiviral agents
Bacteria (Eubacteria)
Bovine herpesvirus 1
Cell cycle
Cytomegalovirus
Drug interactions

Drug resistance
Equid herpesvirus 1
Fungi
Fungicides
Hepatitis B virus
Hepatitis C virus
Herpesviridae
Human
Human T-lymphotropic virus
Human herpesvirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 6
Human herpesvirus 7
Human herpesvirus 8
Human immunodeficiency virus
Human papillomavirus
Infection
Parasite
Parasiticides
Post-transcriptional processing
Pseudorabies virus
Transcription, genetic
Virus
Yeast
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Proteins
mRNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Nucleoside analogs
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(early; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gC; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Eye, disease
(herpetic keratitis; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(immediate early; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Drug delivery systems
(intrathecal; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(late; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(nasal; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(ophthalmic; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(oral; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(parenterals; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(pulmonary; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(rectal; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT DNA formation
(replication; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(tk; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(topical; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT Drug delivery systems
(vaginal; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT 141349-86-2, Cdk-2 kinase 144114-21-6, HIV-1 protease 150428-23-2, Cyclin-dependent kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT 66-81-9, Cycloheximide 4408-78-0, Phosphonoacetic acid 75330-75-5, Lovastatin 99533-80-9, K252a 101622-50-8, Iso-olomoucine 167869-21-8, PD98059
RL: PAC (Pharmacological activity); BIOL (Biological study)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT 70-00-8, Trifluorothymidine 96-48-0, γ-Butyrolactone 145-63-1, Suramin 606-58-6, Toyocamycin 938-55-6, 6-Dimethylaminopurine 2365-40-4 3056-17-5, Stavudine 30516-87-1, Azidothymidine 51131-85-2, 9-Hydroxyellipticine 59277-89-3, Acyclovir 62996-74-1, Staurosporine 69655-05-6, Dideoxyinosine 82005-12-7, Hymenialdisine 82349-15-3, Indirubin-3'-monoxime 101622-51-9, Olomoucine 104227-87-4, Famciclovir 124832-26-4, Valacyclovir 134678-17-4, Lamivudine 136470-78-5, Abacavir 142273-20-9, Kenpaullone 146426-40-6, Flavopiridol 164658-13-3, CGP60474 186692-46-6, Roscovitine 199986-75-9, CVT-313 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 237430-03-4, Alsterpaullone
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)
IT 9001-92-7, Protease

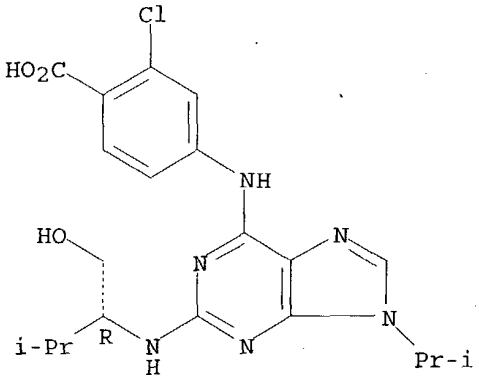
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

IT **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(drugs with target cellular proteins and drugs which target pathogen-encoded proteins for single and combination therapy)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 18 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:337316 HCAPLUS

DN 137:75189

ED Entered STN: 07 May 2002

TI Structural Classification of Protein Kinases Using 3D Molecular Interaction Field Analysis of Their Ligand Binding Sites: Target Family Landscapes

AU Naumann, Thorsten; Matter, Hans

CS DI&A Chemistry Molecular Modeling, Aventis Pharma Deutschland GmbH, Frankfurt am Main, D-65926, Germany

SO Journal of Medicinal Chemistry (2002), 45(12), 2366-2378
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

CC 7-5 (Enzymes)

AB Protein kinases are critical components of signaling pathways and trigger various biol. events. Several members of this superfamily are interesting targets for novel therapeutic approaches. All known eukaryotic protein kinases exhibit a conserved catalytic core domain with an ATP (ATP) binding site, which often is targeted in drug discovery programs. However, as ATP is common to kinases and other proteins, specific protein-ligand interactions are crucial prerequisites for valuable ATP site-directed ligands. In the present study, a set of 26 X-ray structures of eukaryotic protein kinases were classified into subfamilies with similar protein-ligand interactions in the ATP binding site using a chemometrical approach based on principal component anal. (PCA) and consensus PCA. This classification does not rely on protein sequence

similarities, as descriptors are derived from three-dimensional (3D) binding site information only computed using GRID mol. interaction fields. The resulting classification, which we refer to as "target family landscape", lead to the identification of common binding pattern and specific interaction sites for particular kinase subfamilies. Moreover, those findings are in good agreement with exptl. selectivity profiles for a series of 2,6,9-substituted purines as CDK inhibitors. Their interpretation in structural terms unveiled favorable substitutions toward selective CDK inhibitors and thus allowed for a rational design of specific ligands with minimized side effects. Addnl. 3D-quant. structure-activity relationship (QSAR) analyses of a larger set of CDK-directed purines lead to the identification of essential structural requirements for affinity in this CDK ATP binding site. The combined interpretation of 3D-QSAR and the kinase target family landscape provides a consistent view to protein-ligand interactions, which are both favorable for affinity and selectivity in this important subfamily.

ST protein kinase classification target family landscape

IT Principal component analysis
(3D mol. interaction field anal. of ligand binding sites permits structural classification of protein kinases into target family landscapes)

IT QSAR (structure-activity relationship)
(3D-QSAR anal. of purine-based CDK inhibitors and protein-derived selectivity models address requirements for ligand affinity to ATP binding site of CDK)

IT Enzyme functional sites
(ligand-binding; 3D mol. interaction field anal. of ligand binding sites permits structural classification of protein kinases into target family landscapes)

IT 141349-86-2, Protein kinase CDK2
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(3D mol. interaction field anal. of ligand binding sites permits structural classification of protein kinases into target family landscapes)

IT 9001-88-1, Phosphorylase kinase 52660-18-1, Protein kinase ck1 88201-45-0, Insulin receptor tyrosine kinase 142008-29-5, CAMP-dependent protein kinase 142243-02-5, MAP kinase 144697-17-6, c-Src protein tyrosine kinase
RL: PRP (Properties)
(3D mol. interaction field anal. of ligand binding sites permits structural classification of protein kinases into target family landscapes)

IT 2365-40-4 101622-51-9, Olomoucine 186692-46-6, Roscovitine 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(3D-QSAR anal. of purine-based CDK inhibitors and protein-derived selectivity models address requirements for ligand affinity to ATP binding site of CDK)

RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD

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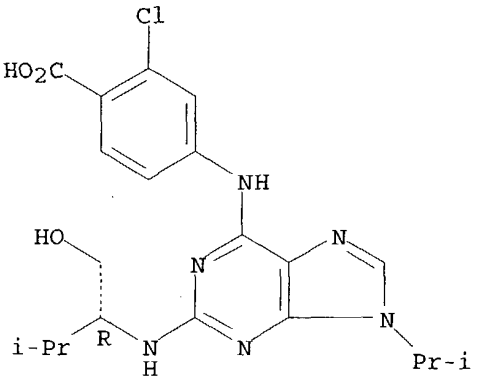
IT **212844-54-7**, Purvalanol B
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(3D-QSAR anal. of purine-based CDK inhibitors and protein-derived selectivity models address requirements for ligand affinity to ATP binding site of CDK)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 19 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:293432 HCAPLUS
DN 136:319353
ED Entered STN: 19 Apr 2002
TI Cyclin kinase inhibitors for the treatment and prevention of infections
IN Albrecht, Thomas; Meijer, Laurent; Schaffer, Priscilla; Schang, Luis
PA Board of Regents, the University of Texas System, USA; The Trustees of the University of Pennsylvania
SO PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DT Patent

LA English
IC ICM A61K031-00
CC 1-5 (Pharmacology)
Section cross-reference(s): 10, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002030410	A2	20020418	WO 2001-US31835	20011010
	WO 2002030410	A3	20020711		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002013132	A5	20020422	AU 2002-13132	20011010
PRAI	US 2000-685986	A1	20001010		
	US 2000-304185P	P	20001011		
	WO 2001-US31835	W	20011010		

AB The invention relates to methods for the treatment or prevention of the infections. More particularly, the invention relates to methods for screening for modulators that inhibit cyclin-dependent kinase and the use of these putative inhibitors to control proliferation of a DNA virus that is dependent upon events associated with cell proliferation for replication. The DNA virus includes any of the herpesvirus family, and most particularly human cytomegalovirus.

ST antiviral antibacterial antiparasitic screening cyclin kinase inhibitor; DNA virus proliferation control cyclindependent kinase inhibitor pharmaceutical

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D1-3; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(G; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Interphase (cell cycle)
(G1-phase; cyclin kinase inhibitors for the treatment and prevention of infections)

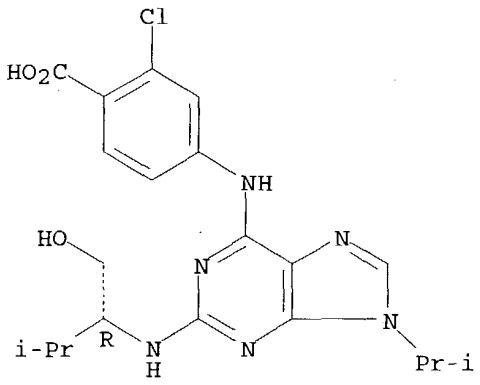
IT Interphase (cell cycle)
(G2-phase; cyclin kinase inhibitors for the treatment and prevention of infections)

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(H; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(I; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(K; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Interphase (cell cycle)
(S-phase; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(T; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Adhesion, biological
(apparatus; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Infection
(bacterial; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Biology
(cell; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Analysis
Antiviral agents
Cell cycle
Cytoskeleton
DNA viruses
Drug screening
Drugs
Hepadnaviridae
Human
Human
Human adenovirus
Human herpesvirus
Interphase (cell cycle)
Ions
Papovaviridae
Parvovirus
Poxviridae
Transcription, genetic
(cyclin kinase inhibitors for the treatment and prevention of infections)
IT Phospholipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cyclin kinase inhibitors for the treatment and prevention of infections)
IT Cyclin dependent kinase inhibitors
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin kinase inhibitors for the treatment and prevention of infections)
IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cyclin-dependent kinase; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Drug delivery systems

(inhalants; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Drug delivery systems
(oral, alimentary; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Infection
(parasitic; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Drug delivery systems
(parenterals; cyclin kinase inhibitors for the treatment and prevention of infections)
IT DNA formation
(replication, inhibitors; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Drug delivery systems
(topical; cyclin kinase inhibitors for the treatment and prevention of infections)
IT Infection
(viral; cyclin kinase inhibitors for the treatment and prevention of infections)
IT 56-65-5, ATP, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(binding, inhibitors of; cyclin kinase inhibitors for the treatment and prevention of infections)
IT 60-92-4, CAMP 7440-70-2, Calcium, biological studies 7665-99-8, CGMP 9001-84-7, Phospholipase A2 9001-86-9, Phospholipase C 141349-86-2, Cyclin-dependent kinase 2 141436-78-4, Protein kinase C 143375-65-9, Cyclin-dependent kinase 1 147014-96-8, Cyclin-dependent kinase 5 147014-97-9, Cyclin-dependent kinase 4 150428-23-2, Cyclin-dependent kinase 153190-71-7, Cyclin-dependent kinase 3 182938-13-2, Cyclin-dependent kinase 9 303014-92-8, Cyclin-dependent kinase 6 330197-29-0, Cyclin-dependent kinase 7 372092-80-3, Protein kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cyclin kinase inhibitors for the treatment and prevention of infections)
IT 96-48-0, γ-Butyrolactone 145-63-1, Suramin 606-58-6, Toyocamycin 938-55-6, 6-Dimethylaminopurine 2365-40-4 51131-85-2, 9-Hydroxyellipticine 62996-74-1, Staurosporine 82005-12-7, Hymenialdisine 101622-51-9, Olomoucine 142273-20-9, Kenpaullone 146426-40-6, Flavopiridol 160807-49-8 164658-13-3, CGP60474 186692-46-6, Roscovitine 199986-75-9, CVT-313 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B 237430-03-4, Alsterpaullone
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin kinase inhibitors for the treatment and prevention of infections)
IT **212844-54-7**, Purvalanol B
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin kinase inhibitors for the treatment and prevention of infections)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 20 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:843104 HCAPLUS
DN 136:112231
ED Entered STN: 21 Nov 2001
TI Synthesis and biological evaluation of myoseverin derivatives: microtubule assembly inhibitors
AU Chang, Young-Tae; Wignall, Sarah M.; Rosania, Gustavo R.; Gray, Nathanael S.; Hanson, Sarah R.; Su, Andrew I.; Merlie, John, Jr.; Moon, Ho-Sang; Sangankar, Sameep B.; Perez, Omar; Heald, Rebecca; Schultz, Peter G.
CS Department of Chemistry, New York University, New York, NY, 10003, USA
SO Journal of Medicinal Chemistry (2001), 44(26), 4497-4500
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 27
AB Myoseverin, a trisubstituted purine, inhibits microtubule assembly in vitro, interferes with normal mitotic spindle assembly, and arrests the cell cycle in mitosis in U937 cells. We synthesized a variety of myoseverin derivs. and screened them for inhibition of spindle assembly in Xenopus egg exts. and for microtubule disassembly in vitro. Selected compds. were tested against 60 cancer cell lines at the National Cancer Institute as possible anticancer drug candidates.
ST myoseverin deriv prepn microtubule assembly inhibitor structure antitumor
IT Structure-activity relationship
(microtubule assembly-inhibiting; synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)
IT Antitumor agents
Hydrophobicity
Microtubule
(synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)
IT Tubulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)
IT 267402-71-1DP, Myoseverin, derivs. 267402-71-1P, Myoseverin 361431-12-1P 361431-13-2P 361431-14-3P 361431-25-6P 361431-27-8P, Myoseverin B 361431-29-0P 391249-58-4P 391249-59-5P 391249-60-8P
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)

IT 39639-54-8P 288305-85-1P 361430-93-5P 361430-96-8P 361430-97-9P
361431-23-4P 361431-24-5P 361431-26-7P 361431-30-3P
361431-31-4P 361431-36-9P 361431-37-0P 361431-38-1P 361431-40-5P
361431-43-8P 391249-61-9P 391249-62-0P 391249-63-1P 391249-64-2P
391249-65-3P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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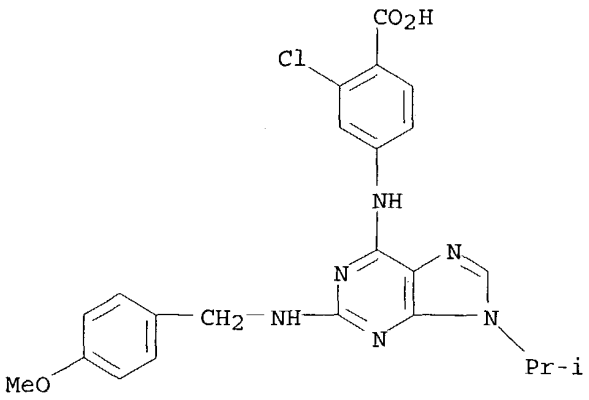
IT **361431-23-4P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and biol. evaluation of myoseverin derivs.: microtubule assembly inhibitors)

RN 361431-23-4 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(4-methoxyphenyl)methyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)



L31 ANSWER 21 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:514513 HCAPLUS

DN 135:251928

ED Entered STN: 17 Jul 2001
TI Discovery of estrogen sulfotransferase inhibitors from a purine library screen
AU Verdugo, Dawn E.; Cancilla, Mark T.; Ge, Xue; Gray, Nathanael S.; Chang, Young-Tae; Schultz, Peter G.; Negishi, Masahiko; Leary, Julie A.; Bertozzi, Carolyn R.
CS Departments of Chemistry and Molecular and Cell Biology, University of California, Berkeley, CA, 94720, USA
SO Journal of Medicinal Chemistry (2001), 44(17), 2683-2686
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
CC 1-12 (Pharmacology)
Section cross-reference(s): 2, 7, 27, 28
AB There is now substantial evidence that sulfated biomols. (i.e., carbohydrates, proteins, and steroids) contribute to many disease states, including chronic inflammation, HIV-1 infection, and hormone-dependent breast tumor growth. The sulfate ester is often a key determinant of bioactivity, directing significant attention to the corresponding enzymes, the sulfotransferases, as a new class of therapeutic targets. Estrogen sulfotransferase (EST) catalyzes the transfer of a sulfuryl group from 3'-phosphoadenosine 5'-phosphosulfate (PAPS) to estrogen (3,17-β-estradiol) and estrogen-like compds. in the cytosol, solubilizing them to maintain hormone homeostasis. Herein we report the discovery of potent and selective EST inhibitors derived from a purine-based library that possess all of the qualities required for cell-based and pharmacol. studies. In addition, we report the application of a recently described mass spectrometry (MS) assay for rapid identification of novel inhibitors for this therapeutically interesting sulfotransferase. Members of this purine-based library have the benefit of drug-like properties. We have discovered several purine- based inhibitors, including one with nanomolar potency, for EST using two parallel screening methods. The most potent of these compds. may prove useful as chemical tools for elucidating the role of EST in steroid homeostasis and tumor cell proliferation.
ST estrogen sulfotransferase inhibitor design purine library screening
IT Combinatorial chemistry
Drug design
Drug screening
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT Steroids, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT Enzyme kinetics
(of inhibition; discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT Combinatorial library
(purine-based; discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT Homeostasis
(steroid; discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT Cell proliferation
(tumor; discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT 39639-54-8 188644-49-7 188644-52-2 188644-54-4 188644-61-3

188644-69-1 189232-41-5 189232-42-6 190654-60-5 199986-71-5
199986-75-9 199986-90-8 199986-95-3 199987-05-8 199987-14-9
199987-36-5 203436-23-1 203436-24-2 203436-32-2 206275-66-3
206275-76-5 212779-48-1 212844-53-6, 1-Butanol, 2-[[6-[(3-
chlorophenyl)amino]-9-(1-methylethyl)-9H-purin-2-yl]amino]-3-methyl-,
(2R)- **212844-54-7** 220696-56-0 220696-57-1 220791-04-8
220791-08-2 220791-11-7 220791-16-2 220791-21-9 220791-22-0
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220792-35-8 220792-55-2 220792-57-4 220792-60-9 220792-62-1
220793-19-1 229966-55-6 244030-34-0 244030-35-1 244030-36-2
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361430-76-4 361430-77-5 361430-78-6 361430-79-7 361430-80-0
361430-81-1 361430-82-2 361430-83-3 361430-84-4 361430-85-5
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361431-50-7 361431-51-8 361431-52-9 361431-53-0 361431-54-1
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361431-60-9 361431-61-0 361431-62-1 361431-63-2 361431-64-3
361431-65-4 361431-66-5 361431-67-6 361431-68-7 361431-69-8
361431-70-1 361431-71-2 361431-72-3 361431-73-4 361431-74-5
361431-75-6 361431-76-7 361431-77-8 361431-78-9 361431-79-0
361431-80-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)

IT 361431-81-4 361431-82-5 **361431-83-6** 361431-84-7
361431-85-8 361431-86-9 361431-87-0 361431-88-1 361431-89-2
361431-90-5 361431-91-6 361431-92-7 361431-93-8 361431-94-9
361431-95-0 361431-96-1 361431-97-2 361431-98-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(discovery of estrogen sulfotransferase inhibitors from a purine

library screen)
IT 150428-23-2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT 9032-76-2, Estrogen sulfotransferase
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)
IT 188644-72-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(notdiscovery of estrogen sulfotransferase inhibitors from a purine library screen)
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Armstrong, J; Angew Chem, Int Ed Eng 2000, V39, P1303 HCAPLUS
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(3) Bamforth, K; Eur J Pharmacol-Environ Toxicol Pharmacol Sect 1992, V228, P15 HCAPLUS
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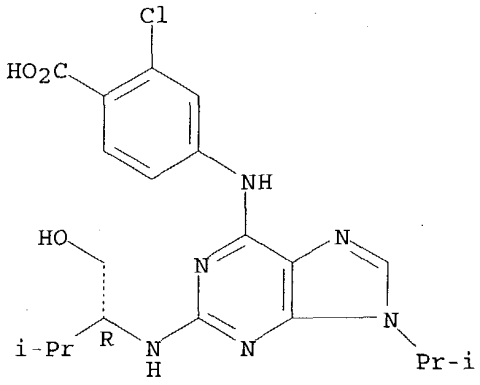
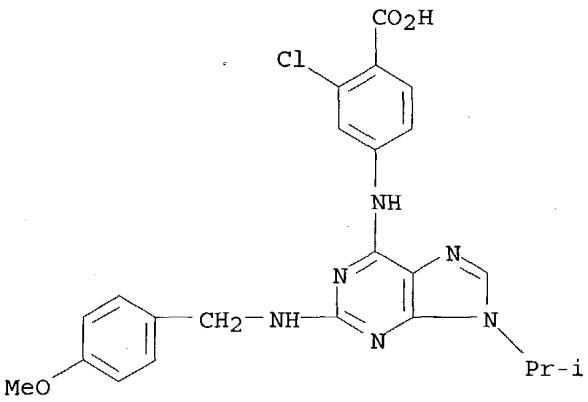
(26) Zhang, H; J Biol Chem 1998, V273, P10888 HCAPLUS
IT **212844-54-7 361431-23-4 361431-83-6**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(discovery of estrogen sulfotransferase inhibitors from a purine library screen)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

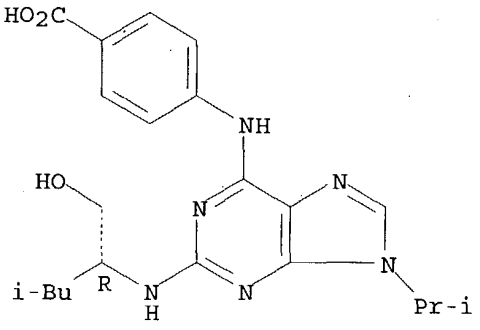


RN 361431-23-4 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(4-methoxyphenyl)methyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)



RN 361431-83-6 HCAPLUS
CN Benzoic acid, 4-[[2-[[(1R)-1-(hydroxymethyl)-3-methylbutyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 22 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:483660 HCAPLUS
DN 135:282675
ED Entered STN: 05 Jul 2001
TI Structure-activity relationships and inhibitory effects of various purine derivatives on the in vitro growth of Plasmodium falciparum
AU Harmse, L.; van Zyl, R.; Gray, N.; Schultz, P.; Leclerc, S.; Meijer, L.; Doerig, C.; Havlik, I.
CS Faculty of Health Sciences, Department of Experimental and Clinical Pharmacology, University of the Witwatersrand, Parktown, 2193, S. Afr.
SO Biochemical Pharmacology (2001), 62(3), 341-348
CODEN: BCPCA6; ISSN: 0006-2952
PB Elsevier Science Inc.
DT Journal
LA English
CC 1-3 (Pharmacology)
AB The development of novel chemotherapeutic agents has become an urgent task due to the development and rapid spread of drug resistance in Plasmodium falciparum, the protozoan parasite responsible for cerebral malaria. Cyclin-dependent kinases (CDKs) are essential for the regulation of the eukaryotic cell cycle, and several enzymes of this family have been identified in P. falciparum. In recent years, a number of purine-derived kinase inhibitors have been synthesized, some of which display selective activity against CDKs. This report describes a study in which various purine derivs. were screened for in vitro antimalarial activity. The erythrocytic asexual stages of the chloroquine-resistant P. falciparum strain (FCR-3) were cultivated in vitro in the presence of the various purines, and their effect on parasite proliferation was determined by the [3H]hypoxanthine incorporation assay. Our results show considerable variation in the sensitivity of P. falciparum to the different purines, as well as a general independence from their effect on purified starfish CDK1/cyclin B activity, which has been the standard assay used to identify CDK-specific inhibitors. Two subfamilies of purines with moderate to poor activity against CDK1/cyclin B activity showed submicromolar activity against P. falciparum. Structure-activity anal. indicates that certain structural features are associated with increased activity against P. falciparum. These features can be exploited to synthesize compds. with higher activity and specificity towards P. falciparum.
ST antimalarial purine deriv structure activity Plasmodium
IT Antimalarials
Plasmodium falciparum
Structure-activity relationship
(structure-activity relationships and inhibitory effects of various purine derivs. on in vitro growth of Plasmodium falciparum)
IT 2365-40-4 101622-51-9, Olomoucine 186692-46-6, Roscovitine 212779-48-1 212779-49-2 212844-53-6, (R)-Purvalanol A **212844-54-7**, Purvalanol B 220696-57-1 220791-22-0 220791-52-6 220792-35-8 220792-57-4, Aminopurvalanol A 229966-55-6, (S)-Purvalanol A 231951-20-5 244030-42-0 **289508-12-9**, Methylpurvalanol B 361431-89-2 364598-85-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(structure-activity relationships and inhibitory effects of various purine derivs. on in vitro growth of Plasmodium falciparum)
IT 144378-32-5, Cyclin B/cdc2 protein kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(structure-activity relationships and inhibitory effects of various purine derivs. on in vitro growth of Plasmodium falciparum)
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
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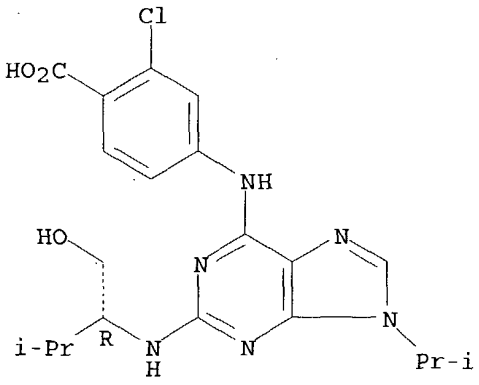
IT **212844-54-7**, Purvalanol B **289508-12-9**, Methylpurvalanol B
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(structure-activity relationships and inhibitory effects of various purine derivs. on in vitro growth of Plasmodium falciparum)

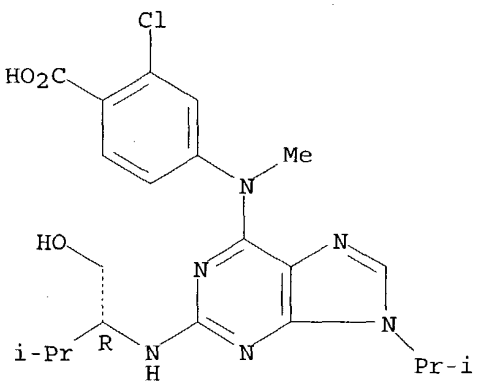
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 289508-12-9 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]methylamino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 23 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472502 HCAPLUS
DN 135:66249
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 receptor agonists as analgesics
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-7076
ICS A61K031-52; A61K031-485; A61P029-00; A61K031-7076; A61K031-485
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045715	A2	20010628	WO 2000-GB4885	20001219
	WO 2001045715	A3	20020314		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1248632	A2	20021016	EP 2000-985629	20001219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003518068	T2	20030603	JP 2001-546654	20001219
	US 2003004126	A1	20030102	US 2002-168189	20020618
PRAI	GB 1999-30071	A	19991220		
	WO 2000-GB4885	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with it comprises administering to a mammal, an adenosine A1 agonist or a physiol. acceptable salt or a solvate and an opioid. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. 5'-Deoxy-5'-fluoro-N-(tetrahydropyran-

4-yl)adenosine and administered orally to rats and morphine was administered s.c. to the same rats. The compds. inhibited carrageenan-induced edema and allodynia.

ST analgesic adenosine A1 receptor agonist prepn; opioid adenosine A1 receptor agonist prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 receptor agonists as analgesics)

IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 receptor agonists as analgesics)

IT Opioids
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 receptor agonists as analgesics)

IT Drug interactions
(synergistic; formulations of adenosine A1 receptor agonists as analgesics)

IT 253124-46-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 receptor agonists as analgesics)

IT 57-27-2, Morphine, biological studies 57-42-1, Pethidine 58-61-7, Adenosine, biological studies 76-42-6, Oxycodone 76-57-3, Codeine 76-99-3, Methadone 77-07-6, Levorphanol 125-28-0, Dihydrocodeine 359-83-1, Pentazocine 437-38-7, Fentanyl 469-62-5, Dextropropoxyphene 561-27-3, Diamorphine 52485-79-7, Buprenorphine 71195-58-9, Alfentanil 124555-18-6 223774-67-2 346425-37-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 receptor agonists as analgesics)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists as analgesics)

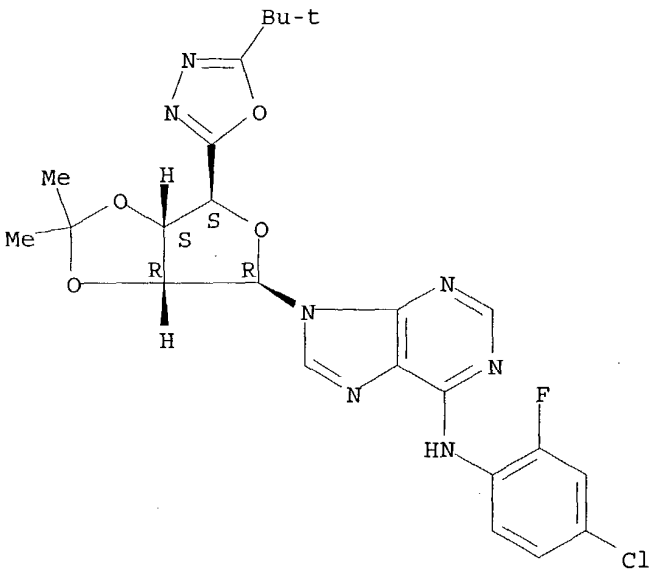
IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists as analgesics)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists as analgesics)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 24 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472501 HCAPLUS
DN 135:66248
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 receptor agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-70
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045714	A2	20010628	WO 2000-GB4892	20001219
	WO 2001045714	A3	20020228		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1239881	A2	20020918	EP 2000-985633	20001219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003518067	T2	20030603	JP 2001-546653	20001219
	US 2003004129	A1	20030102	US 2002-168242	20020618
PRAI	GB 1999-30083	A	19991220		
	WO 2000-GB4892	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated comprises administering to a mammal an adenosine A1 agonist or a physiol. acceptable salt or solvate and gabapentin or pregabalin. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection.

ST adenosine A1 receptor agonist prepn; gabapentin adenosine A1 receptor agonist prepn; analgesic gabapentin adenosine A1 agonist prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 receptor agonists)

IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 receptor agonists)

IT Drug delivery systems
(oral; formulations of adenosine A1 receptor agonists)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

IT 253124-46-8P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 receptor agonists)

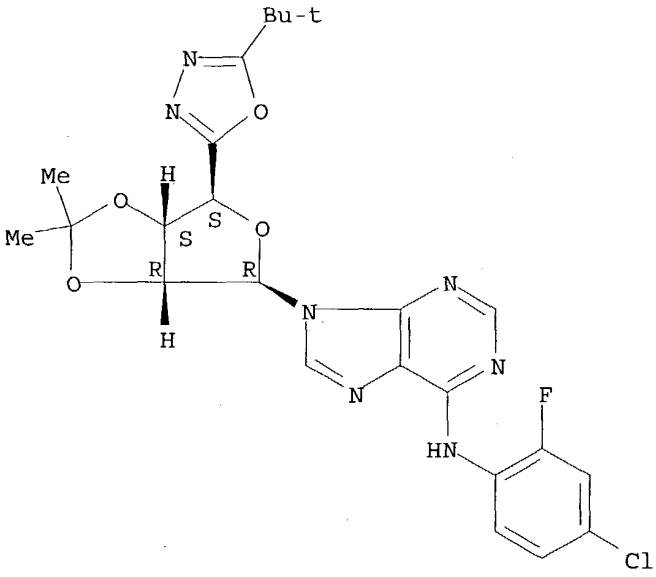
IT 58-61-7, Adenosine, biological studies 60142-96-3, Gabapentin 124555-18-6 148553-50-8, Pregabalin 346425-37-4
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 receptor agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 25 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472474 HCAPLUS
DN 135:81974
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045686	A2	20010628	WO 2000-GB4970	20001219
	WO 2001045686	A3	20020328		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1239883	A2	20020918	EP 2000-985682	20001219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003518044	T2	20030603	JP 2001-546425	20001219
	US 2002198170	A1	20021226	US 2002-168283	20020618
PRAI	GB 1999-30082	A	19991220		
	WO 2000-GB4970	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with it comprises administering to a mammal an adenosine A1 agonist or a salt or solvate and an EP1 antagonist. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection.

ST adenosine A1 receptor agonist prepn; analgesic adenosine A1 receptor agonist prepn; receptor EP1 antagonist adenosine agonist prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 agonists)

IT Prostanoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(EP1, antagonists; formulations of adenosine A1 agonists)

IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 agonists)

IT Drug delivery systems
(oral; formulations of adenosine A1 agonists)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT 253124-46-8P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 agonists)

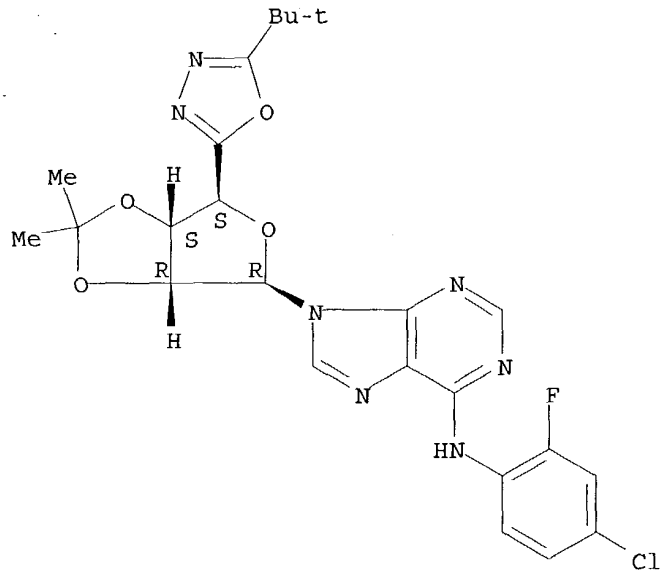
IT 58-61-7, Adenosine, biological studies 124555-18-6 346425-37-4 346670-92-6, ZD 6416 346670-93-7, ZD 6804
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 26 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472473 HCAPLUS
DN 135:81973
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045685	A2	20010628	WO 2000-GB4902	20001219
	WO 2001045685	A3	20020228		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1239882	A2	20020918	EP 2000-985643	20001219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003518043	T2	20030603	JP 2001-546424	20001219
	US 2003018008	A1	20030123	US 2002-168190	20020618
PRAI	GB 1999-30077	A	19991220		
	WO 2000-GB4902	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with it comprises administering to a mammal an adenosine A1 agonist or a salt or solvate and a 5HT3 antagonist. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol (adenosine A1 agonist) (I) was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection. Alosetron and I inhibited carrageenan-induced edema and allodynia in rats.

ST adenosine receptor A1 agonist prepn; receptor 5HT3 antagonist adenosine A1 prepn; analgesic adenosine receptor A1 agonist prepn

IT 5-HT antagonists
(5-HT3; formulations of adenosine A1 agonists)

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 agonists)

IT Drug interactions
(additive; formulations of adenosine A1 agonists)

IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 agonists)

IT Drug delivery systems
(oral; formulations of adenosine A1 agonists)

IT 253124-46-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 agonists)

IT 58-61-7, Adenosine, biological studies 89565-68-4, Tropisetron 90182-92-6, Zacopride 109889-09-0, Granisetron 115956-12-2, Dolasetron 115956-13-3, Dolasetron mesylate 117086-68-7, BRL 46470 120635-74-7, Cilansetron 121650-80-4, Pancopride 122852-42-0, Alosetron 122852-69-1, Alosetron hydrochloride 123040-69-7, Azasetron 123258-84-4, Itasetron 123441-85-0 123482-22-4, Zatosetron 123805-17-4, ADR-851 124555-18-6 127595-43-1, BIMU 1 128486-54-4, Lurosetron 129300-27-2, (+)-FK 1052 132907-72-3, YM060 136174-04-4, RG-12915 143381-68-4, ADR-882 151213-86-4 154439-43-7 346425-37-4 346576-42-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 agonists)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

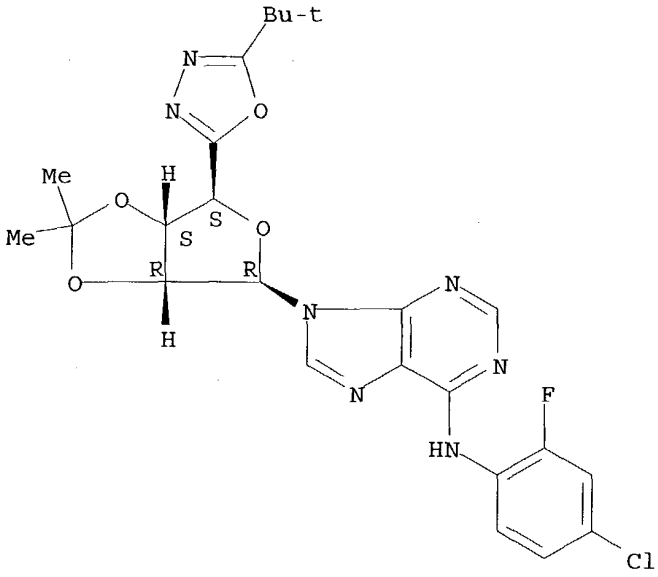
IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 27 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472472 HCAPLUS
DN 135:81972
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045684	A2	20010628	WO 2000-GB4888	20001219
	WO 2001045684	A3	20020314		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	EP 1239880	A2	20020918	EP 2000-985631	20001219

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

	JP 2003518042	T2	20030603	JP 2001-546423	20001219
	US 2003008842	A1	20030109	US 2002-168196	20020618
PRAI	GB 1999-30079	A	19991220		
	WO 2000-GB4888	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with it comprises administering to a mammal an adenosine A1 agonist or a salt or solvate and a sodium channel blocker. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection.

ST analgesic adenosine A1 agonist prepn; sodium channel blocker adenosine agonist prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 agonists)

IT Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 agonists)

IT Drug delivery systems
(oral; formulations of adenosine A1 agonists)

IT Ion channel blockers
(sodium; formulations of adenosine A1 agonists)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT 253124-46-8P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 agonists)

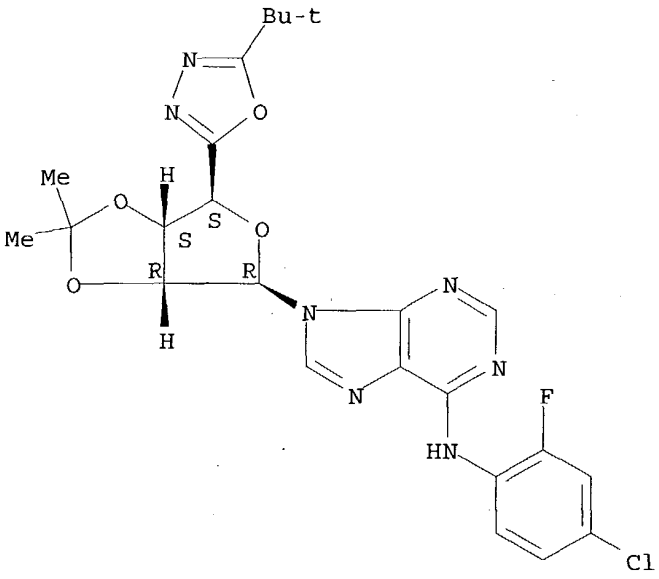
IT 57-41-0, Phenytoin 58-61-7, Adenosine, biological studies 137-58-6, Lidocaine 298-46-4, Carbamazepine 27262-47-1, Levobupivacaine 28721-07-5, Oxcarbazepine 31828-71-4, Mexiletine 84057-84-1, Lamotrigine 84057-95-4, Ropivacaine 97240-79-4, Topiramate 106308-44-5, Rufinamide 124555-18-6 128298-28-2, Remacemide 130801-33-1 181144-66-1, CO-102862 202825-46-5, NW-1015 206260-33-5, Irampanel 212778-82-0 221019-25-6, Crobenetine 227604-18-4 259828-60-9 346425-37-4 346577-95-5 346670-94-8, RS 100642 346670-95-9, RS 132943 346670-96-0, NW 1029 346670-97-1, AWD 33-173
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 28 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472471 HCAPLUS
DN 135:81971
ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045683	A2	20010628	WO 2000-GB4883	20001219
	WO 2001045683	A3	20020314		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1239879	A2	20020918	EP 2000-985627	20001219
	EP 1239879	B1	20040225		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003519104	T2	20030617	JP 2001-546422	20001219

	US 2003004128	A1	20030102	US 2002-168195	20020618
PRAI	GB 1999-30075	A	19991220		
	WO 2000-GB4883	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with it comprises administering to a mammal an adenosine A1 agonist or a salt or solvate and an NSAID, e.g., a COX-2 inhibitor. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol (I) was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection. I and 2-(4-ethoxy-phenyl)-3-(4-methanesulfonylphenyl)pyrazolo[1,5-b]pyridazine(COX-2 inhibitor), were administered at 1% to rats. The compds. showed inhibition of carrageenan-induced edema and allodynia.

ST adenosine A1 agonist analgesic prepn; antiinflammatory adenosine A1 agonist analgesic prepn; COX 2 inhibitor adenosine agonist prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 agonists)

IT Drug interactions
(additive; formulations of adenosine A1 agonists)

IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 agonists)

IT Anti-inflammatory agents
(nonsteroidal; formulations of adenosine A1 agonists)

IT Drug delivery systems
(oral; formulations of adenosine A1 agonists)

IT Drug interactions
(synergistic; formulations of adenosine A1 agonists)

IT 220991-20-8
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(COX 189; formulations of adenosine A1 agonists)

IT 253124-46-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 agonists)

IT 50-33-9, Phenylbutazone, biological studies 53-86-1, Indomethacin 58-61-7, Adenosine, biological studies 61-68-7, Mefenamic acid 5104-49-4, Flurbiprofen 13539-59-8, Azapropazone 13710-19-5, Tolfenamic acid 15307-86-5, Diclofenac 15687-27-1, Ibuprofen 21256-18-8, Oxaprozin 22071-15-4, Ketoprofen 22161-81-5, Dexketoprofen 22204-53-1, Naproxen 22494-42-4, Diflunisal 29679-58-1, Fenoprofen 33005-95-7, Tiaprofenic acid 36322-90-4, Piroxicam 36330-85-5, Fenbufen 38194-50-2, Sulindac 41340-25-4, Etodolac 42924-53-8, Nabumetone 51803-78-2, Nimesulide 59804-37-4, Tenoxicam 71125-38-7, Meloxicam 74103-06-3, Ketorolac 80937-31-1, Flosulide 89796-99-6, Aceclofenac 93014-16-5, SC-299 123653-11-2, NS-398 124555-18-6 139226-28-1, Darbufelone 158089-95-3, S 2474 158205-05-1, L-745337 162011-90-7, Rofecoxib 165328-51-8 169590-42-5, Celecoxib 177365-18-3 178974-57-7 180200-68-4, JTE-522 180696-49-5, L-768277

181695-72-7, Valdecoxib 186819-03-4 190967-35-2, RWJ-63556
191732-72-6, CDC 501 198470-84-7, Parecoxib 202409-33-4, MK 663
212126-32-4 213763-99-6, L 804600 215435-18-0, D-1367 215435-69-1,
L-783003 221148-46-5 221216-60-0 265114-22-5, UR 8877 265114-23-6,
UR 8880 329306-31-2, S-33516 346425-37-4 346670-75-5, CS 179
346670-76-6, DRF 4367 346670-78-8, L 791456 346670-79-9, RS 113472
346670-80-2, SC 5755 346670-83-5, UR 8813 346670-87-9, CS 502
(pharmaceutical)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 agonists)

IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

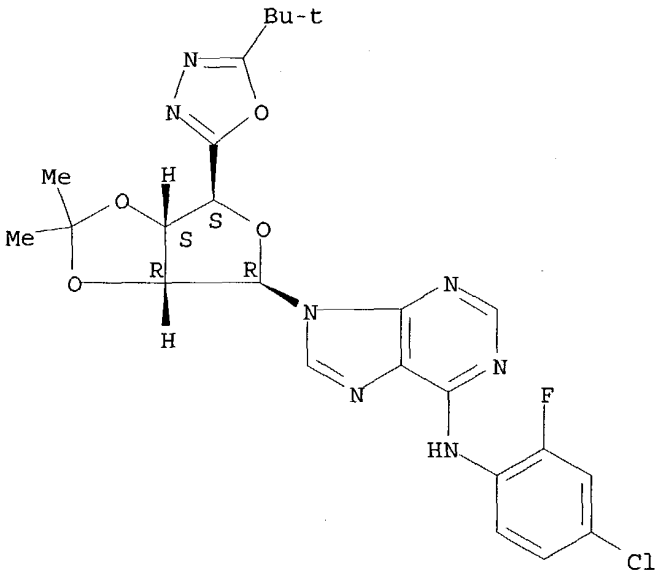
IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

IT 329900-75-6, Cyclooxygenase-2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; formulations of adenosine A1 agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 agonists)

RN 253127-02-5 HCAPLUS
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 29 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:472470 HCAPLUS
DN 135:66244

ED Entered STN: 29 Jun 2001
TI Formulations of adenosine A1 receptor agonists
IN Bountra, Charanjit; Clayton, Nicholas Maughan; Naylor, Alan
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-00
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 33
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045682	A2	20010628	WO 2000-GB4878	20001219
	WO 2001045682	A3	20020314		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1239878	A2	20020918	EP 2000-985623	20001219
	EP 1239878	B1	20040225		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003518041	T2	20030603	JP 2001-546421	20001219
	US 2003004127	A1	20030102	US 2002-168193	20020618
PRAI	GB 1999-30085	A	19991220		
	WO 2000-GB4878	W	20001219		

AB A method of treating conditions associated with pain and alleviating the symptoms associated with them comprises administering to a mammal an adenosine A1 agonist or a salt or solvate and a 5HT1 receptor agonist. The present invention also provides pharmaceutical formulations and patient packs comprising the combinations. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5-[6-(4-chloro-2-fluorophenylamino)purin-9-yl]tetrahydrofuran-3,4-diol was prepared in a series of steps by the reaction of (3aS,4S,6R,6aR)-6-(6-chloropurin-9-yl)-2,2-dimethyltetrahydrofuro[3,4-d][1,3]dioxole-4-carboxylic acid with 2,2-dimethylpropionic acid hydrazide followed by the cyclization of the resulting compound, and subsequent treatment with 4-chloro-2-fluoroaniline and deprotection.
ST adenosine A1 receptor agonist prepn; analgesic adenosine A1 receptor agonist prepn; receptor 5HT1 adenosine A1 agonist prepn
IT 5-HT agonists
(5-HT1; formulations of adenosine A1 receptor agonists)
IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; formulations of adenosine A1 receptor agonists)
IT Analgesics
Anti-inflammatory agents
Drug delivery systems
(formulations of adenosine A1 receptor agonists)
IT Drug delivery systems
(oral; formulations of adenosine A1 receptor agonists)
IT 42826-42-6 57946-56-2, 4-Chloro-2-fluoroaniline 120355-42-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

IT 253126-43-1P 253126-44-2P **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

IT 253124-46-8P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(formulations of adenosine A1 receptor agonists)

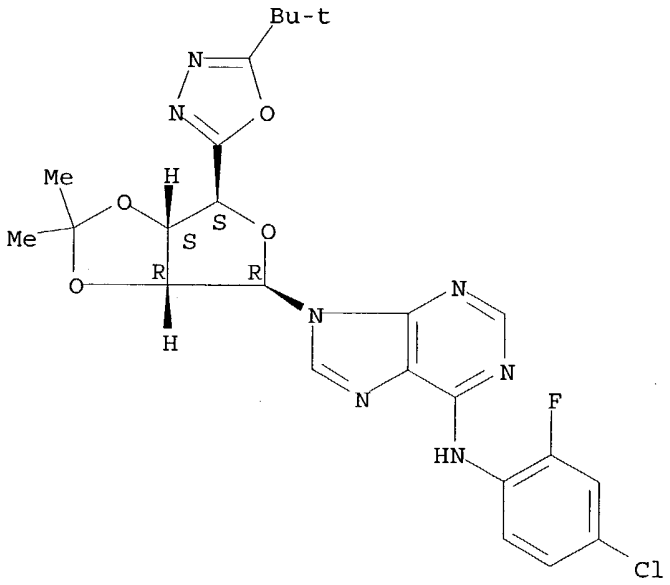
IT 58-61-7, Adenosine, biological studies 511-12-6, Dihydroergotamine 103628-46-2, Sumatriptan 121679-13-8, Naratriptan 124555-18-6 133790-13-3, IS159 139264-17-8, Zolmitriptan 143322-58-1, Eletriptan 144034-80-0, Rizatriptan 152317-89-0, Alniditan 154323-57-6, Almotriptan 158747-02-5, Frovatriptan 170912-52-4, Donitriptan 182563-08-2, LY 334370 187665-65-2, PNU-142633 208464-67-9, ALX-0646 346425-37-4 346459-62-9, U 1092291 346460-12-6, PNY 142633
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(formulations of adenosine A1 receptor agonists)

IT **253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formulations of adenosine A1 receptor agonists)

RN 253127-02-5 HCAPLUS

CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 30 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:417478 HCAPLUS

DN 135:166813

ED Entered STN: 10 Jun 2001

TI Solid-Phase Development of a 1-Hydroxybenzotriazole Linker for Heterocycle Synthesis Using Analytical Constructs

AU Scicinski, Jan J.; Congreve, Miles S.; Jamieson, Craig; Ley, Steven V.; Newman, Emma S.; Vinader, Victoria M.; Carr, Robin A. E.
CS Department of Chemistry, GlaxoSmithKline Research and Development University Chemical Laboratories, Cambridge, CB2 1EW, UK
SO Journal of Combinatorial Chemistry (2001), 3(4), 387-396
CODEN: JCCHFF; ISSN: 1520-4766
PB American Chemical Society
DT Journal
LA English
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
OS CASREACT 135:166813
AB The development of a 1-hydroxybenzotriazole linker for the synthesis of heterocyclic derivs. is described, utilizing anal. construct methodol. to facilitate the anal. of resin samples. A UV-chromophore-containing anal. construct enabled the accurate determination of resin loading and the automated monitoring of key reactions using only small quantities of resin. The syntheses of an array of isoxazole derivs. are reported.
ST heterocyclic compd solid phase synthesis hydroxybenzotriazole linker
IT Solid phase synthesis
(solid-phase synthesis of heterocyclic compds. using hydroxybenzotriazole linker)
IT 693-13-0 870-50-8 930-69-8, Sodium thiophenolate
RL: RGT (Reagent); RACT (Reactant or reagent)
(preparation of)
IT 87-42-3 92-54-6, 1-Phenylpiperazine 104-94-9, 4-Methoxyaniline 106-96-7, Propargyl bromide 110-69-0 453-71-4, 4-Fluoro-3-nitrobenzoic acid 540-37-4, 4-Iodoaniline 932-90-1 1694-92-4, o-Nitrobenzenesulfonyl chloride 2089-36-3 2393-23-9, 4-Methoxybenzylamine 2706-56-1, 2-Pyridineethanamine 5680-79-5, Methyl glycinate hydrochloride 22689-05-0, 9-Anthracenepropanol 42074-68-0 76193-67-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-phase synthesis of heterocyclic compds. using hydroxybenzotriazole linker)
IT 15054-42-9P 50907-17-0P 215056-52-3P 354156-53-9DP, polymer bound 354156-54-0DP, polymer bound 354156-55-1DP, polymer bound 354156-56-2DP, polymer bound 354156-57-3P 354156-58-4P 354156-59-5DP, polymer bound 354156-60-8DP, polymer bound 354156-61-9DP, polymer bound 354156-62-0DP, polymer bound 354156-63-1DP, polymer bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(solid-phase synthesis of heterocyclic compds. using hydroxybenzotriazole linker)
IT 354156-64-2P 354156-65-3P 354156-66-4P 354156-67-5P 354156-68-6P 354156-69-7P **354156-70-0P** 354156-71-1P 354156-72-2P 354156-73-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of heterocyclic compds. using hydroxybenzotriazole linker)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Barlos, K; Tetrahedron Lett 1989, V30, P3943 HCAPLUS
(2) Barlos, K; Tetrahedron Lett 1989, V30, P3947 HCAPLUS
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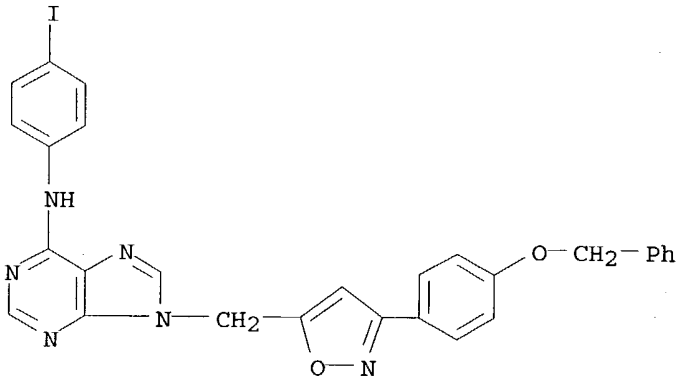
(42) Yan, B; Tetrahedron Lett 1996, V52, P843 HCAPLUS

IT **354156-70-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of heterocyclic compds. using hydroxybenzotriazole linker)

RN 354156-70-0 HCAPLUS

CN 9H-Purin-6-amine, N-(4-iodophenyl)-9-[[3-[4-(phenylmethoxy)phenyl]-5-isoxazolyl]methyl]- (9CI) (CA INDEX NAME)



L31 ANSWER 31 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:223238 HCAPLUS
DN 135:19488
ED Entered STN: 29 Mar 2001
TI Synthesis of a new series of purine derivatives and their anti-cyclin-dependent kinase activities
AU Legraverend, Michel; Ludwig, Odile; Leclerc, Sophie; Meijer, Laurent
CS UMR 176 CNRS, Institut Curie, Section de Recherche, Centre Universitaire, Orsay, 91405, Fr.
SO Journal of Heterocyclic Chemistry (2001), 38(1), 299-303
CODEN: JHTCAD; ISSN: 0022-152X
PB HeteroCorporation
DT Journal
LA English
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
OS CASREACT 135:19488
AB The synthesis of new purine derivs. designed to inhibit cell cycle regulating cyclin-dependent kinases (CDKs), is reported. These compds., related to olomoucine and roscovitine, are characterized by the presence of a pyrrolidine methanol substituent at C-2 and a variety of ortho, meta and/or para substituents on the C-6 arylamino group.
ST chloroiodopurine arylamino substitution; cyclin dependent kinase inhibitor prepn pyrrolidine arylaminopurine deriv
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(B; preparation of a new series of purine derivs. and their activity as)
IT Cyclin dependent kinase inhibitors
(preparation of a new series of purine derivs. and their activity as)
IT Substitution reaction, nucleophilic
(regioselective; preparation of a new series of purine derivs. and their cyclin-dependent kinase activities)
IT 192327-96-1P 192328-05-5P 244030-52-2P 313390-43-1P 313390-56-6P
313390-63-5P 313390-69-1P 313390-73-7P 313390-80-6P 313390-83-9P
313390-87-3P 313390-89-5P 313390-92-0P 313390-94-2P 313390-96-4P
313390-98-6P 313391-00-3P 313391-02-5P 343327-14-0P 343327-18-4P
343327-19-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of a new series of purine derivs. and their cyclin-dependent kinase activities)
IT 62-53-3, Aniline, reactions 75-31-0, Isopropylamine, reactions
95-76-1, 3,4-Dichloroaniline 100-46-9, Benzylamine, reactions
102-49-8, 3,4-Dichlorobenzylamine 103-49-1, Dibenzylamine 104-86-9,
4-Chlorobenzylamine 106-40-1, 4-Bromoaniline 108-42-9, 3-Chloroaniline
122-51-0 591-19-5, 3-Bromoaniline 696-40-2, 3-Iodobenzylamine
2393-23-9, 4-Methoxybenzylamine 2620-50-0, Piperonylamine 2740-83-2,
3-Trifluoromethylbenzylamine 3048-01-9, 2-Trifluoromethylbenzylamine
3300-51-4, 4-Trifluoromethylbenzylamine 5071-96-5, 3-Methoxybenzylamine
6850-57-3, 2-Methoxybenzylamine 20989-17-7, (S)-2-Phenylglycinol
34967-24-3, 3,5-Dimethoxybenzylamine 55583-59-0 56613-80-0,
(R)-2-Phenylglycinol 68832-13-3, (R)-2-Pyrrolidinemethanol 85068-29-7,
3,5-Bis(-trifluoromethyl)benzylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of a new series of purine derivs. and their cyclin-dependent kinase activities)
IT 207220-30-2P 244030-28-2P 247193-41-5P 247193-45-9P 267885-16-5P
267885-18-7P 267885-19-8P 267885-20-1P 267885-23-4P

267885-26-7P 267885-27-8P 313390-14-6P **313390-16-8P**
313390-24-8P 313390-28-2P 313390-29-3P 313390-31-7P 313390-34-0P
313390-36-2P 313390-38-4P 343327-12-8P 343327-15-1P 343327-16-2P
343327-17-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of a new series of purine derivs. and their cyclin-dependent kinase activities)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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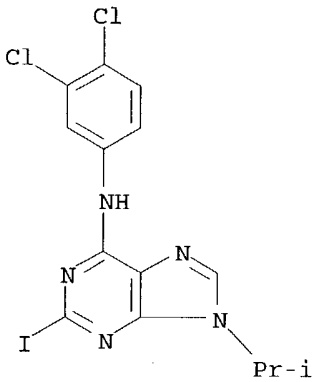
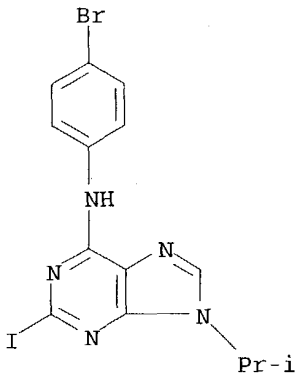
IT **267885-26-7P 313390-16-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of a new series of purine derivs. and their cyclin-dependent kinase activities)

RN 267885-26-7 HCAPLUS
CN 9H-Purin-6-amine, N-(3,4-dichlorophenyl)-2-iodo-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 313390-16-8 HCAPLUS
CN 9H-Purin-6-amine, N-(4-bromophenyl)-2-iodo-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 32 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:842134 HCAPLUS
DN 134:17347
ED Entered STN: 01 Dec 2000
TI Preparation and formulation of purine derivatives for a variety of pharmaceutical uses
IN Haesslein, Jean-Luc
PA Hoechst Marion Roussel, Fr.
SO PCT Int. Appl., 203 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM C07D473-16
ICS C07D473-40; A61K031-52; A61P025-28
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 28, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000071543	A1	20001130	WO 2000-FR1335	20000518
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	FR 2793794	B1	20010727		
	BR 2000011282	A	20020226	BR 2000-11282	20000518
	EP 1183256	A1	20020306	EP 2000-929625	20000518
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	JP 2003500407	T2	20030107	JP 2000-619799	20000518
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	ZA 2001009602	A	20021121	ZA 2001-9602	20011121
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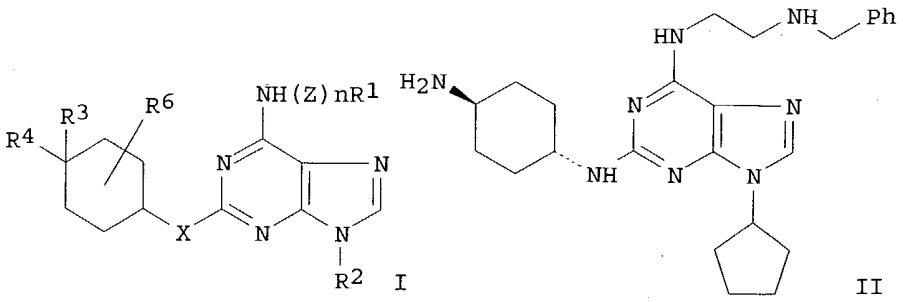

I II

AB Purines, such as I [R1 = H, aryl, alkyl, sulfonyl, heterocyclyl; R2 = alkyl, cycloalkyl, heterocyclyl; R3, R4 = H, OH, NH2, alkyl, alkoxy, alkylamino, arylamino, etc.; R3R4 = O, oxime; R6 = H, OH, halogen, alkyl, alkoxy, etc; Y = O, NR5; R5 = H, CO2CMe3, alkyl, cycloalkyl; Z = NH, CH2, SO2, CO, COO, CONH, etc.; n = 1, 2], were prepared for pharmaceutical use in the treatment of diseases, such as cancer, psoriasis, parasitoses, Alzheimer's, and neurodegeneration (no biol. testing data presented). Thus, purine II was prepared starting from 2,6-dichloropurine, cyclopentanol, trans-1,4-cyclohexanediamine, 1,2-ethanediamine, and benzaldehyde. Also, pharmaceutical formulations of the prepared purines were presented.

ST purine prepn pharmaceutical

IT 310399-74-7P 310399-76-9P 310399-95-2P **310400-47-6P**
310400-65-8P 310400-66-9P 310400-91-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

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310402-42-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

IT 55-21-0, Benzamide 62-53-3, Aniline, reactions 63-74-1, Sulfanilamide 70-55-3, 4-Methylbenzenesulfonamide 71-36-3, 1-Butanol, reactions 72-14-0 78-92-2, 2-Butanol 86-81-7, 3,4,5-Trimethoxybenzaldehyde 92-67-1, 4-Aminobiphenyl 94-09-7, 4-Aminobenzoic acid ethyl ester 96-41-3, Cyclopentanol 98-10-2, Benzenesulfonamide 98-60-2, 4-Chlorobenzenesulfonyl chloride 98-68-0, 4-Methoxybenzenesulfonyl chloride 100-01-6, 4-Nitroaniline, reactions 100-07-2, 4-Methoxybenzoyl chloride 100-46-9, Benzylamine, reactions 100-52-7, Benzaldehyde, reactions 104-15-4, 4-Methylbenzenesulfonic acid, reactions 104-88-1, 4-Chlorobenzaldehyde, reactions 104-94-9 105-07-7, 4-Cyanobenzaldehyde 107-10-8, 1-Propanamine, reactions 107-15-3, 1,2-Ethanediamine, reactions 122-01-0, 4-Chlorobenzoyl chloride 123-11-5, 4-Methoxybenzaldehyde, reactions 147-73-9, meso-Tartaric acid 329-15-7, 4-(Trifluoromethyl)benzoyl chloride 349-88-2, 4-Fluorobenzenesulfonyl chloride 403-43-0, 4-Fluorobenzoyl chloride 421-83-0, Trifluoromethanesulfonyl chloride 453-20-3, 3-Hydroxytetrahydrofuran 454-92-2, 3-(Trifluoromethyl)benzoic acid 455-14-1, 4-(Trifluoromethyl)benzenamine 455-19-6, 4-(Trifluoromethyl)benzaldehyde 459-57-4, 4-Fluorobenzaldehyde 461-82-5, 4-(Trifluoromethoxy)benzenamine 535-80-8, 3-Chlorobenzoic acid 582-33-2, 3-Aminobenzoic acid ethyl ester 584-02-1, 3-Pentanol 587-04-2, 3-Chlorobenzaldehyde 659-28-9, 4-(Trifluoromethoxy)benzaldehyde 672-58-2, 3-(Trifluoromethyl)benzenesulfonamide 696-40-2, 3-Iodobenzenemethanamine 701-34-8, 4-Bromobenzenesulfonamide 785-56-8, 3,5-Bis(trifluoromethyl)benzoyl chloride 873-74-5, 4-Aminobenzonitrile 1014-81-9, 3-(Trifluoromethoxy)benzoic acid 1132-19-0, 4-Ethoxybenzenesulfonamide 1571-08-0, 4-Formylbenzoic acid methyl ester 2524-67-6 2615-25-0, trans-1,4-Diaminocyclohexane 2835-68-9, 4-Aminobenzamide 2905-62-6, 3,5-Dichlorobenzoyl chloride 2922-45-4, 3-Pyridinesulfonamide 2991-42-6, 4-(Trifluoromethyl)benzenesulfonyl chloride 3024-72-4, 3,4-Dichlorobenzoyl chloride 3334-05-2, 3-Hydroxytetrahydrothiophene 3535-37-3, 3,4-Dimethoxybenzoyl chloride 3544-24-9, 3-Aminobenzamide 3544-25-0, 4-Aminophenylacetonitrile 4518-10-9, 3-Aminobenzoic acid methyl ester 5438-70-0 5451-40-1, 2,6-Dichloropurine 5780-07-4, 7-Methoxy-1,3-benzodioxole-5-carboxaldehyde 5959-36-4, 4-Aminobutanoic acid ethyl ester 6232-11-7 6287-38-3, 3,4-Dichlorobenzaldehyde 6292-59-7, 4-(1,1-Dimethylethyl)benzenesulfonamide 6335-39-3, 4-(1-Methylethyl)benzenesulfonamide 7073-36-1, 2-Chloro-4-nitrobenzoyl chloride 10147-37-2, 1-Methylethylsulfonyl chloride 10203-08-4, 3,5-Dichlorobenzaldehyde 13205-48-6, 4-Methylthiobenzoic acid 18469-52-8, 4-(Aminomethyl)benzoic acid methyl ester 26638-43-7, 2-(Chlorosulfonyl)benzoic acid methyl ester 27489-62-9, trans-4-Amino-1-cyclohexanol 34328-46-6, 4-Chloro-3-(trifluoromethyl)benzaldehyde 78091-58-4 89599-01-9, 3-Bromobenzenesulfonamide 91843-34-4, 3-(Aminomethyl)benzoic acid ethyl ester hydrochloride 102562-86-7, 3-(Aminomethyl)benzamide 103008-54-4 111300-06-2 115868-92-3 177583-27-6 177908-37-1 310401-86-6 310401-87-7 310401-88-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

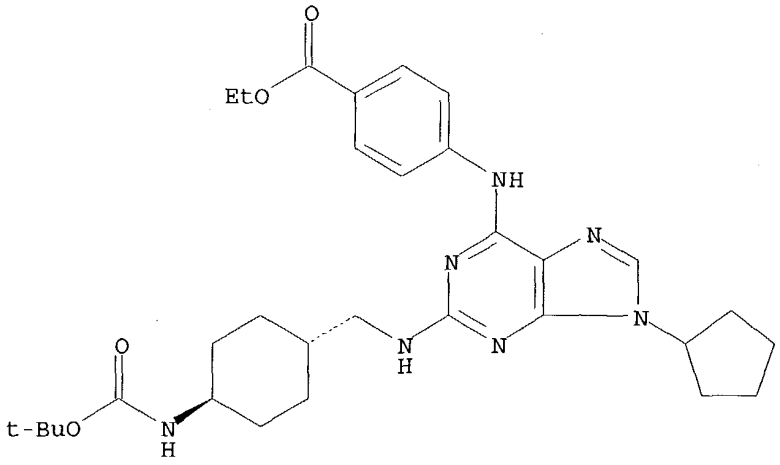
(1) CV Therapeutics Inc; WO 9805335 A 1998 HCAPLUS
(2) Centre Nat Rech Scient; WO 9720842 A 1997 HCAPLUS
(3) Chiron Corp; WO 9816528 A 1998 HCAPLUS
(4) Ciba Geigy Ag; WO 9716452 A 1997 HCAPLUS
(5) Hoechst Ag; EP 0452680 A 1991 HCAPLUS
(6) Marion Merrell Dow Inc; EP 0545413 A 1993 HCAPLUS
(7) Meijer, L; WO 9907705 A 1999 HCAPLUS

IT **310400-47-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

RN 310400-47-6 HCAPLUS

CN Benzoic acid, 4-[[9-cyclopentyl-2-[[[trans-4-[[(1,1-dimethylethoxy)carbonyl]amino]cyclohexyl]methyl]amino]-9H-purin-6-yl]amino]-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

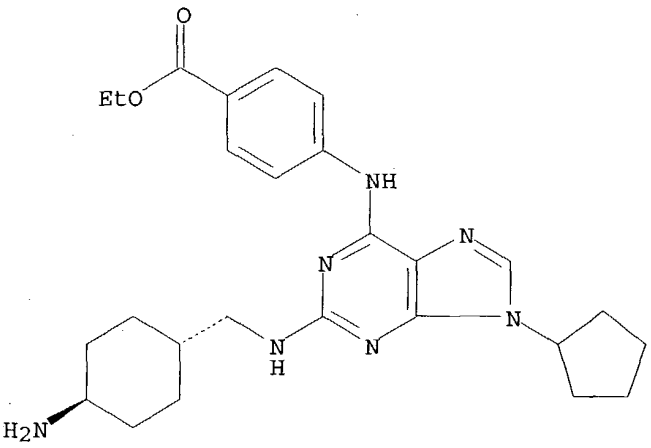
Relative stereochemistry.



●2 HCl

IT **310400-48-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)
RN 310400-48-7 HCAPLUS
CN Benzoic acid, 4-[[2-[[(trans-4-aminocyclohexyl)methyl]amino]-9-cyclopentyl-9H-purin-6-yl]amino]-, ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Relative stereochemistry.

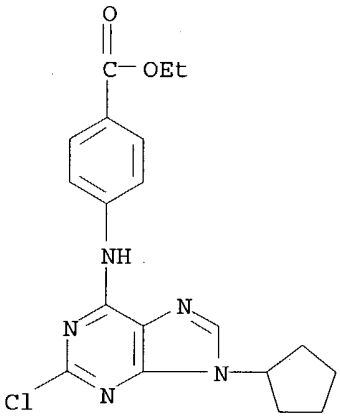


●2 HCl

IT **310401-02-6P 310401-27-5P 310401-37-7P**
310401-44-6P 310401-52-6P 310401-59-3P

310401-61-7P 310401-62-8P 310401-63-9P
310401-78-6P 310401-79-7P 310401-80-0P
310401-82-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formulation of purine derivs. for a variety of pharmaceutical uses)

RN 310401-02-6 HCAPLUS
CN Benzoic acid, 4-[(2-chloro-9-cyclopentyl-9H-purin-6-yl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



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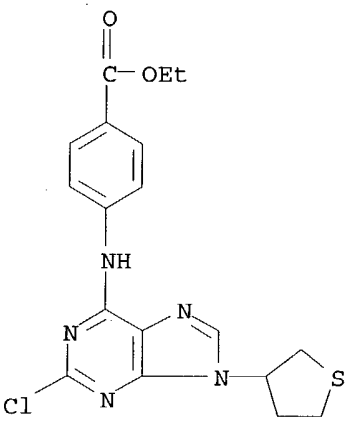

RN 310401-37-7 HCAPLUS
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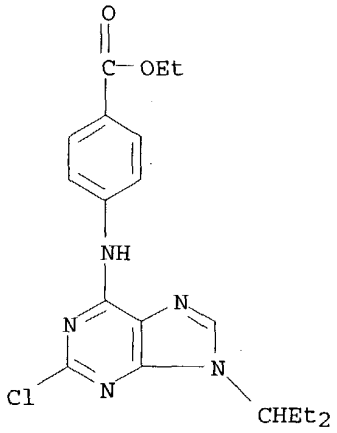

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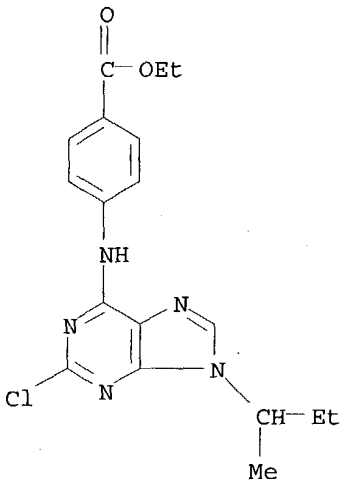

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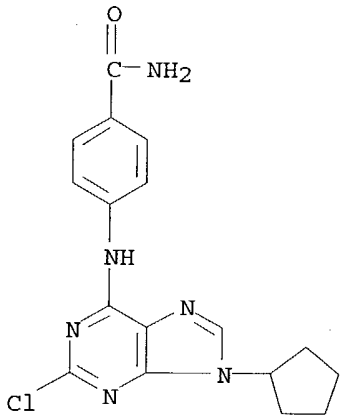

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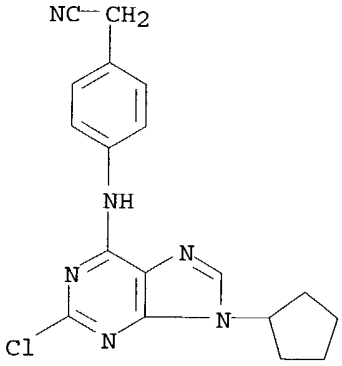

RN 310401-61-7 HCAPLUS
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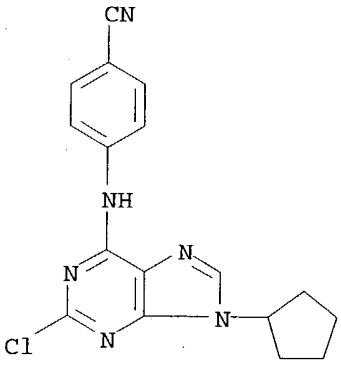

RN 310401-62-8 HCAPLUS
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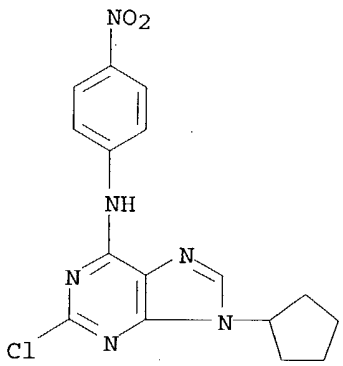
INDEX NAME)



RN 310401-63-9 HCAPLUS
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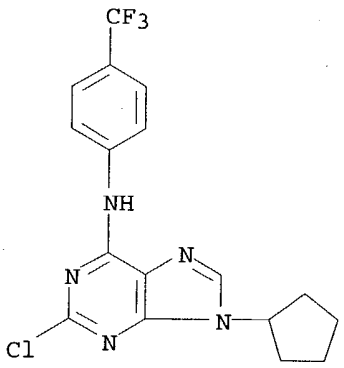

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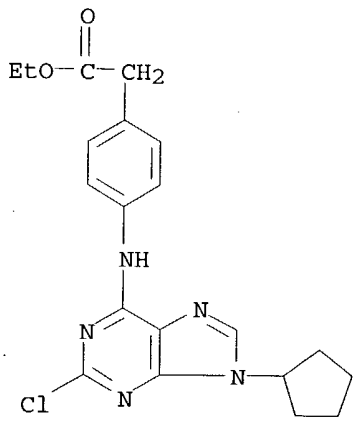

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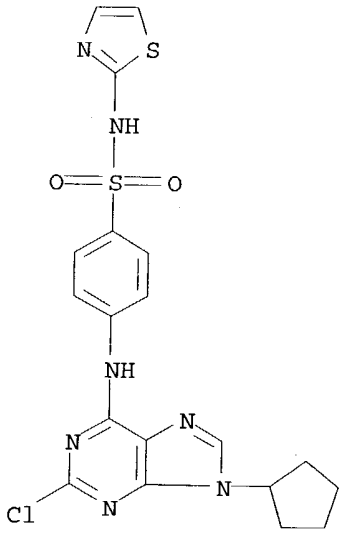
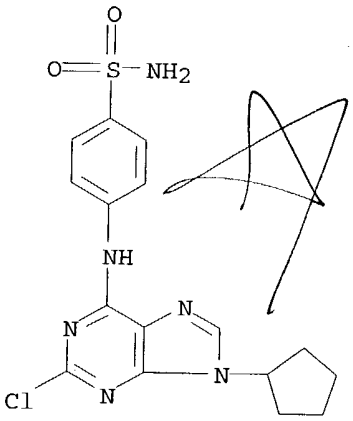
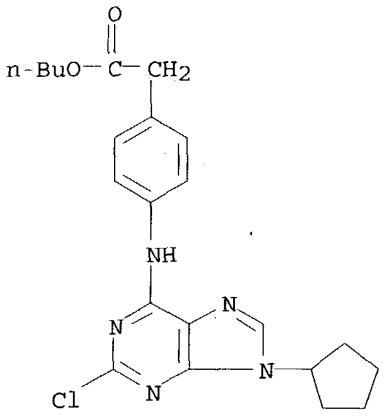


RN 310401-80-0 HCAPLUS
CN Benzenesulfonamide, 4-[(2-chloro-9-cyclopentyl-9H-purin-6-yl)amino]- (9CI) (CA INDEX NAME)



RN 310401-82-2 HCAPLUS
CN Benzeneacetic acid, 4-[(2-chloro-9-cyclopentyl-9H-purin-6-yl)amino]-, butyl ester (9CI) (CA INDEX NAME)



L31 ANSWER 33 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:839639 HCAPLUS
DN 134:95058
ED Entered STN: 01 Dec 2000
TI CDK inhibition and the therapeutic potential of targeting the cell cycle
AU Lee, Chul-Hoon; Cho, Youl-Hee
CS Department of Medical Genetics, Hanyang University College of Medicine, Seoul, S. Korea
SO Hanyang Uidae Haksulchi (2000), 20(1), 43-53
CODEN: HIHAD3; ISSN: 0254-5942
PB Hanyang University, Medical College
DT Journal; General Review
LA Korean
CC 1-0 (Pharmacology)
Section cross-reference(s): 13
AB A review with 68 refs. The cell-division cycle is a tightly controlled process that is regulated by the cyclin/CDK family of protein kinase complexes. Stringent control of this process is essential to ensure that DNA synthesis and subsequent mitotic division are accurately and coordinately executed. There is now strong evidence that CDKs, their regulators, and substrates are the targets of genetic alteration in many human cancers. As a result of this, the CDKs have been targeted for drug discovery and a number of small mol. inhibitors of CDKs have been identified. Our attempt here is to illustrate the potential for development of therapeutics to treat human cancers by interfering with cell-cycle progression. Because of the central role that they play in advancing the division cycle, CDKs have been targeted for drug discovery and a number of small mol. compds. have now been identified as CDK inhibitors. These strategies and other targets of intervention within the cell cycle are discussed in our review.
ST review cyclin dependent kinase inhibitor drug cancer cell cycle
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complexes with cyclin-dependent kinase; cyclin-dependent kinase inhibition and therapeutic potential of targeting cell cycle)
IT Cell cycle
Cyclin dependent kinase inhibitors
Drug screening
Neoplasm
(cyclin-dependent kinase inhibition and therapeutic potential of

targeting cell cycle)

IT 150428-23-2, Cyclin-dependent kinase
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complexes with cyclins; cyclin-dependent kinase inhibition and therapeutic potential of targeting cell cycle)

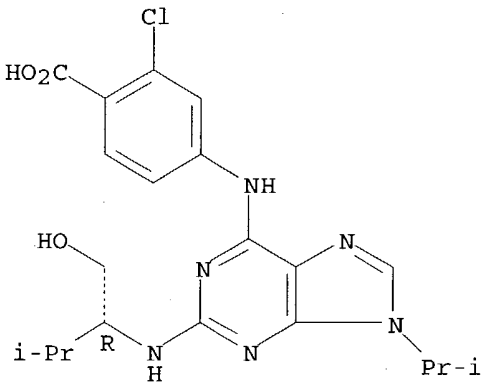
IT 87414-49-1, Butyrolactone I 101622-51-9, Olomoucine 131740-10-8, L868276 146426-40-6, Flavopiridol 186692-46-6, Roscovitine 199986-75-9, CVT-313 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin-dependent kinase inhibition and therapeutic potential of targeting cell cycle)

IT **212844-54-7**, Purvalanol B
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclin-dependent kinase inhibition and therapeutic potential of targeting cell cycle)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 34 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:727124 HCAPLUS

DN 134:50984

ED Entered STN: 16 Oct 2000

TI 3D-QSAR CoMFA on Cyclin-Dependent Kinase Inhibitors

AU Ducrot, Pierre; Legraverend, Michel; Grierson, David S.

CS Section de Recherche, Institut Curie UMR 176 CNRS, Orsay, 91405, Fr.

SO Journal of Medicinal Chemistry (2000), 43(22), 4098-4108
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

CC 1-3 (Pharmacology)

AB Several series of cyclin-dependent kinase inhibitors previously prepared in our laboratory were compared using 3D-QSAR (CDK1) and docking (CDK2) techniques.

Evaluation of our own library of 93 purine derivs. served to establish the model which was validated by evaluation of an external library of 71 compds. The best predictions were obtained with the CoMFA standard model (q2 = 0.68, r2 = 0.90) and with the CoMSIA combined steric, electrostatic, and lipophilic fields (q2 = 0.74, r2 = 0.90). The CDK1 3D-QSAR model was then superimposed to the ATP/CDK2 binding site, giving direct contour maps of the different fields. Although too few compds. were evaluated on CDK5 to derive a 3D-QSAR model, some interesting SARs have been deduced. Comparison of the results obtained from both methods helped with understanding the specific activity of some compds. and designing new specific CDK inhibitors.

ST QSAR CoMFA cyclin dependent kinase inhibitor

IT Drug design
Molecular modeling
QSAR (structure-activity relationship)
Simulation and Modeling, biological
(3D-QSAR CoMFA on cyclin-dependent kinase inhibitors)

IT 152310-07-1 158982-15-1 186692-44-4 186692-46-6 192327-96-1
192327-97-2 192327-98-3 192327-99-4 192328-00-0 192328-01-1
192328-02-2 192328-03-3 192328-04-4 192328-05-5 192328-06-6
207220-30-2 207220-31-3 207220-32-4 207220-34-6 207220-36-8
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247193-48-2 247193-49-3 247193-50-6 247193-52-8 247193-53-9
247193-55-1 247193-56-2 247193-58-4 267885-16-5 267885-23-4
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313389-69-4 313389-73-0 313389-75-2 313389-79-6 313389-98-9
313390-07-7 313390-14-6 **313390-16-8** 313390-24-8
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313390-38-4 313390-43-1 313390-48-6 313390-56-6 313390-63-5
313390-69-1 313390-73-7 313390-76-0 313390-80-6 313390-83-9
313390-87-3 313390-89-5 313390-92-0 313390-94-2 313390-96-4
313390-98-6 313391-00-3 313391-02-5 313391-04-7 313391-06-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3D-QSAR CoMFA on cyclin-dependent kinase inhibitors)

IT 143375-65-9, Cyclin-dependent kinase 1 147014-96-8, Cyclin-dependent kinase 5
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(3D-QSAR CoMFA on cyclin-dependent kinase inhibitors)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Chang, Y; Chem Biol 1999, V6, P361 HCAPLUS
(2) Clark, M; J Comput Chem 1989, V10, P982 HCAPLUS
(3) Clark, M; Tetrahedron Comput Methods 1990, V3, P47 HCAPLUS
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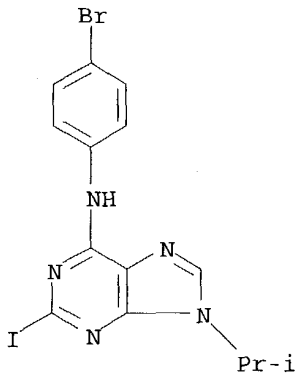
(36) Zimmerman, J; WO 97716452 1997

IT **313390-16-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3D-QSAR CoMFA on cyclin-dependent kinase inhibitors)

RN 313390-16-8 HCAPLUS

CN 9H-Purin-6-amine, N-(4-bromophenyl)-2-iodo-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 35 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:592718 HCAPLUS

DN 133:193164

ED Entered STN: 25 Aug 2000

TI Preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src.

IN Imbach, Patricia; Capraro, Hans-Georg; Zimmermann, Jurg; Caravatti, Giorgio; Furet, Pascal; Brill, Wolfgang Karl-Diether

PA Novartis A.-G., Switz.; Novartis-Erfindungen
SO PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D473-16
ICS C07D473-40; A61K031-52; A61P035-00
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

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PI	WO 2000049018	A1	20000824	WO 2000-EP1271	20000216
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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	JP 2002537300	T2	20021105	JP 2000-599757	20000216
	US 2002016329	A1	20020207	US 2001-927322	20010810
PRAI	GB 1999-3762	A	19990218		
	WO 2000-EP1271	W	20000216		

OS MARPAT 133:193164
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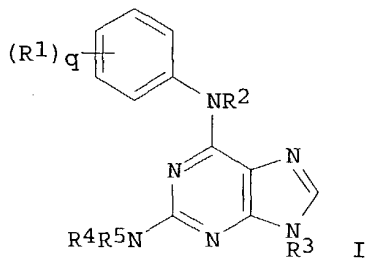

I

AB Title compds. [I; q = 1-5; R1 = SONR6R7, SO2NR6R7, aralkylcarbamoyl, etc.; R2 = H, carbamoyl, alkylcarbamoyl; R3 = (substituted) aliphatyl; R5 amino, OH, PhO, alkoxy, acyl, substituted aliphatyl, carbocyclyl, heterocyclyl, etc.; R4 = H, R5; R4R5, R6R7 = (substituted) alkylene, alkenylene optionally interrupted by O, S, N; R6, R7 = H, aliphatyl, carbocyclyl, heterocyclyl, etc.; with provisos], were prepared Thus, 6-(4-butylaminosulfonylphenylamino)-2-chloro-9-ethyl-9H-purine, diglyme and cis-2-aminocyclohexanecarboxamide were heated at 160° in a sealed tube to give 32% cis-2-[6-(4-butylaminosulfonylphenylamino)-9-ethyl-9H-purin-2-yl-amino]cyclohexanecarboxylic acid amide. I at 0.001-10 μM inhibited protein tyrosine kinase pp60c-src.
ST aminoanilinopurine prepn protein tyrosine kinase inhibitor; purine amino

anilino prepn protein tyrosine kinase inhibitor; osteoporosis treatment aminoanilinopurine prepn; cancer treatment aminoanilinopurine prepn

IT Antitumor agents
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

IT Osteoporosis
(therapeutic agents; preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

IT 143375-65-9 144697-17-6
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)
(inhibitors; preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

IT 289478-98-4P 289478-99-5P 289479-00-1P 289479-01-2P 289479-02-3P
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289479-08-9P 289479-09-0P 289479-10-3P 289479-11-4P 289479-12-5P
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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

IT 62-53-3, Benzenamine, reactions 79-22-1, Methyl chloroformate
100-46-9, Benzylamine, reactions 109-73-9, Butylamine, reactions
140-75-0, 4-Fluorobenzylamine 2393-23-9, 4-Methoxybenzylamine
3240-10-6 3300-51-4, 4-Trifluoromethylbenzylamine 4518-10-9, Methyl 3-aminobenzoate 5451-40-1, 2,6-Dichloropurine 24653-88-1 24717-01-9, cis-2-Aminocyclohexanecarboxamide 27489-62-9, trans-4-Hydroxycyclohexylamine **289480-24-6** 289480-25-7 289480-26-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

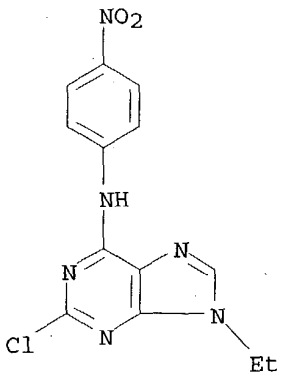
IT 185408-97-3P 289480-13-3P 289480-14-4P **289480-15-5P**
289480-16-6P 289480-17-7P **289480-18-8P** 289480-19-9P
289480-20-2P 289480-21-3P 289480-22-4P 289480-23-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Boehringer Mannheim Gmbh; EP 0212535 A 1987 HCAPLUS
(2) Chiron Corp; WO 9816528 A 1998 HCAPLUS
(3) Ciba Geigy Ag; WO 9716452 A 1997 HCAPLUS
(4) Meijer, L; WO 9907705 A 1999 HCAPLUS

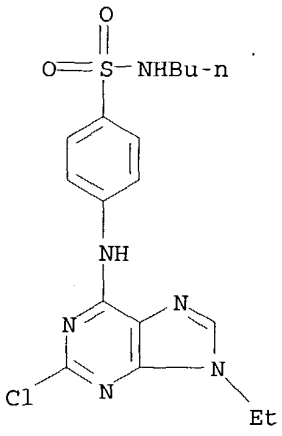
IT **289480-24-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

RN 289480-24-6 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-9-ethyl-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

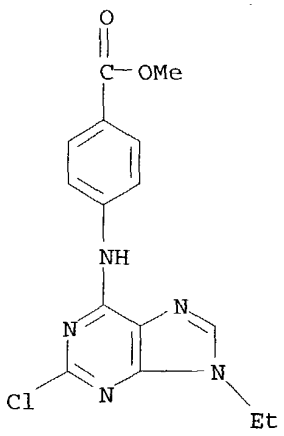


IT **289480-15-5P 289480-18-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)

RN 289480-15-5 HCAPLUS
CN Benzenesulfonamide, N-butyl-4-[(2-chloro-9-ethyl-9H-purin-6-yl)amino]- (9CI) (CA INDEX NAME)



RN 289480-18-8 HCAPLUS
CN Benzoic acid, 4-[(2-chloro-9-ethyl-9H-purin-6-yl)amino]-, methyl ester (9CI) (CA INDEX NAME)



L31 ANSWER 36 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:439429 HCAPLUS
DN 133:187904
ED Entered STN: 30 Jun 2000
TI Intracellular targets of cyclin-dependent kinase inhibitors: identification by affinity chromatography using immobilised inhibitors
AU Knockaert, M.; Gray, N.; Damiens, E.; Chang, Y-T.; Grellier, P.; Grant, K.; Fergusson, D.; Mottram, J.; Soete, M.; Dubremetz, J-F.; Le Roch, K.; Doerig, C.; Schultz, P. G.; Meijer, L.
CS Station Biologique de Roscoff, CNRS, Roscoff, 29682, Fr.
SO Chemistry & Biology (2000), 7(6), 411-422
CODEN: CBOLE2; ISSN: 1074-5521
PB Elsevier Science Ltd.
DT Journal
LA English
CC 1-12 (Pharmacology)
Section cross-reference(s): 10
AB Background: Chemical inhibitors of cyclin-dependent kinases (CDKs) have great therapeutic potential against various proliferative and neurodegenerative disorders. Olomoucine, a 2,6,9-trisubstituted purine, has been optimized for activity against CDK1/cyclin B by combinatorial and medicinal chemical efforts to yield the purvalanol inhibitors. Although many studies support the action of purvalanols against CDKs, the actual intracellular targets of 2,6,9-trisubstituted purines remain unverified. Results: To address this issue, purvalanol B (I) and an N6-methylated, CDK-inactive derivative were immobilized on an agarose matrix. Exts. from a diverse collection of cell types and organisms were screened for proteins binding purvalanol B. In addition to validating CDKs as intracellular targets, a variety of unexpected protein kinases were recovered from the I matrix. Casein kinase 1 (CK1) was identified as a principal I matrix binding protein in Plasmodium falciparum, Leishmania mexicana, Toxoplasma gondii and trypanosoma cruzi. Purvalanol compds. also inhibit the proliferation of these parasites, suggesting that CK1 is a valuable target for further screening with 2,6,9-trisubstituted purine libraries. Conclusions: That a simple batchwise affinity chromatog. approach using two purine derivs. facilitated isolation of a small set of highly purified kinases suggests that this could be a general method for identifying intracellular targets relevant to a particular class of ligands. This method allows a close correlation to be established between the pattern of proteins bound to a

small family of related compds. and the pattern of cellular responses to these compds.

ST cyclin dependent kinase inhibitor intracellular target; affinity chromatog cyclin dependent kinase inhibitor target

IT Affinity chromatography
(intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT Protozoacides
(purvalanol B binding to casein kinase 1 in relation to; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT Leishmania mexicana
Plasmodium falciparum
Toxoplasma gondii
Trypanosoma cruzi
(purvalanol B binding to casein kinase 1 of; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT 52660-18-1
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(1; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT 141467-21-2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(II; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT 143375-65-9, CDK1 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cyclin B complex; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT 9031-72-5, Alcohol dehydrogenase 9074-10-6, Biliverdin reductase 90698-26-3, S6 Kinase II 137632-07-6, Erk1 kinase 137632-07-6 137632-08-7, Erk2 kinase 137632-08-7 141349-86-2, CDK2-kinase 141349-86-2 147014-96-8, CDK5 kinase 150428-23-2, Cyclin-dependent kinase **212844-54-7D**, Purvalanol B, agarose matrix-linked **289508-12-9D**, agarose matrix-linked
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

IT **212844-54-7**, Purvalanol B 220792-57-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(kinase selectivity of; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD

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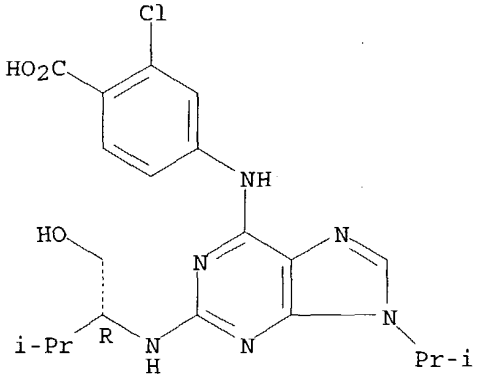
IT **212844-54-7D**, Purvalanol B, agarose matrix-linked
289508-12-9D, agarose matrix-linked
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)

RN 212844-54-7 HCAPLUS

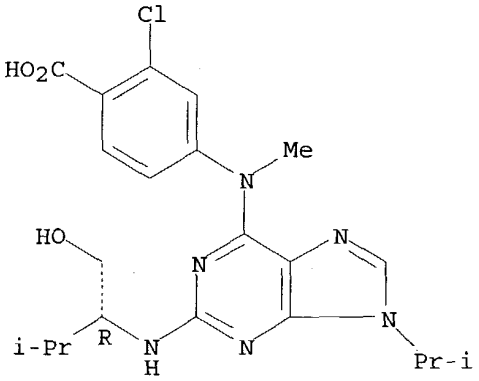
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



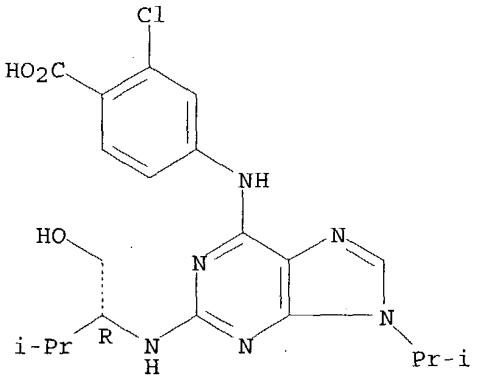
RN 289508-12-9 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]methylamino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7**, Purvalanol B
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(kinase selectivity of; intracellular targets of cyclin-dependent kinase inhibitors and identification by affinity chromatog. using immobilized inhibitors)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 37 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:173539 HCAPLUS
DN 132:347828
ED Entered STN: 17 Mar 2000
TI Solid-Phase Synthesis of Carbocyclic Nucleosides
AU Crimmins, Michael T.; Zuercher, William J.
CS Venable and Kenan Laboratories of Chemistry, The University of North Carolina at Chapel Hill, Chapel Hill, NC, 27599-3290, USA
SO Organic Letters (2000), 2(8), 1065-1067
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
CC 33-9 (Carbohydrates)
OS CASREACT 132:347828
AB An efficient solid-phase synthesis of carbocyclic nucleosides has been developed. The key step is the palladium-catalyzed coupling of a purine derivative to a resin-bound allylic benzoate. The resulting products may be further functionalized on the solid phase. Acidic cleavage affords carbocyclic nucleosides, a class of compds. with demonstrated biol. activity and substantial current interest.
ST purine palladium catalyzed coupling resin allylic benzoate; carbocyclic nucleoside solid phase synthesis
IT Coupling reaction
(palladium-catalyzed; solid-phase synthesis of carbocyclic nucleosides)
IT Solid phase synthesis
(solid-phase synthesis of carbocyclic nucleosides)
IT Carbocyclic nucleosides
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of carbocyclic nucleosides)
IT 12012-95-2 14221-01-3 51364-51-3
RL: CAT (Catalyst use); USES (Uses)
(solid-phase synthesis of carbocyclic nucleosides)
IT 67-62-9, Methoxyamine 106-49-0, 4-Methylphenylamine, reactions 107-11-9, Allylamine 110-91-8, Morpholine, reactions 765-30-0, Cyclopropylamine 2516-34-9, Cyclobutylamine 3619-22-5 5451-40-1, 2,6-Dichloropurine 10310-21-1, 2-Amino-6-chloropurine 268737-88-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-phase synthesis of carbocyclic nucleosides)
IT 136522-33-3DP, p-nitrophenyl Wang carbonate resin bound 143395-28-2P 268737-86-6DP, p-nitrophenyl Wang carbonate resin bound 268737-86-6P 268737-87-7DP, p-nitrophenyl Wang carbonate resin bound 268737-89-9P

268737-90-2P 268737-91-3P 268737-92-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(solid-phase synthesis of carbocyclic nucleosides)
IT 136470-78-5P 136522-33-3P 190894-89-4P 268737-87-7P 268737-93-5P
268737-94-6P **268737-95-7P** 268737-96-8P 268737-97-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of carbocyclic nucleosides)
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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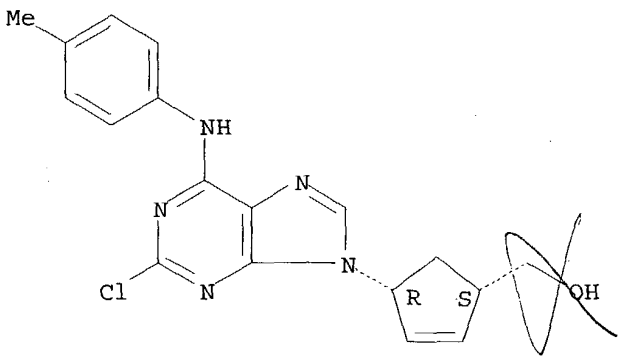
IT **268737-95-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of carbocyclic nucleosides)
RN 268737-95-7 HCAPLUS
CN 2-Cyclopentene-1-methanol, 4-[2-chloro-6-[(4-methylphenyl)amino]-9H-purin-9-yl]-, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 38 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:161781 HCAPLUS
DN 132:331230
ED Entered STN: 12 Mar 2000
TI Cyclin-Dependent Kinase Inhibition by New C-2 Alkynylated Purine Derivatives and Molecular Structure of a CDK2-Inhibitor Complex
AU Legraverend, Michel; Tunnah, Paul; Noble, Martin; Ducrot, Pierre; Ludwig, Odile; Grierson, David S.; Leost, Maryse; Meijer, Laurent; Endicott, Jane

CS Section de Recherche Institut Curie, UMR 176 CNRS, Orsay, 91405, Fr.
SO Journal of Medicinal Chemistry (2000), 43(7), 1282-1292
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
CC 7-3 (Enzymes)
Section cross-reference(s): 28
OS CASREACT 132:331230
AB A new series of 2,6,9-trisubstituted purines, characterized by the presence of a common alkynyl substituent at C-2 and a range of different anilino/benzylamino groups at C-6, were synthesized. These compds. were evaluated for their capacity to inhibit cyclin-dependent kinase activity (CDK1-cyclin B) in vitro. Compds. 4e (N-6-p-Cl-benzylamino derivative) and 5e (N-6-m-Cl-anilino derivative) exhibited the strongest inhibitory activity with an IC50 of 60 nM. The structure of compound 4b (N-6-p-methoxybenzylamino derivative) in complex with human CDK2 was determined by X-ray crystallog., revealing the mol. basis of inhibition by this mol. Subsequent mol. modeling studies allowed us to rationalize the SAR observed for these compds.
ST cyclin dependent kinase inhibition alkynyl purine deriv
IT Enzyme functional sites
(active; cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT Conformation
Crystal structure
Molecular modeling
Molecular recognition
(cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT Structure-activity relationship
(enzyme-inhibiting, cyclin-dependent kinase-inhibiting; cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT Enzyme functional sites
(substrate-binding, ATP-binding; cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT 56-65-5, 5'-ATP, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ATP-binding site; cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT 101622-51-9, Olomoucine 186692-46-6, Roscovitine 207220-33-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT 267885-28-9P 267885-29-0P 267885-30-3P 267885-31-4P 267885-32-5P 267885-33-6P 267885-34-7P 267885-35-8P 267885-36-9P 267885-37-0P 267885-38-1P 267885-39-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)
IT 143375-65-9, CDK1 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)

IT 141349-86-2D, CDK2 kinase, complexes with N-6-p-methoxybenzylamino derivative
267885-28-9D, complexes with CDK2 kinase
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(cyclin-dependent kinase inhibition by new C-2 alkynylated purine derivs. and mol. structure of CDK2-inhibitor complex)

IT 77-75-8, 3-Methyl-1-pentyn-3-ol 207220-30-2 247193-41-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of new C-2 alkynylated purine derivs.)

IT 267885-16-5P 267885-17-6P 267885-18-7P 267885-19-8P 267885-20-1P
267885-21-2P 267885-22-3P 267885-23-4P 267885-24-5P 267885-25-6P
267885-26-7P 267885-27-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of new C-2 alkynylated purine derivs.)

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD

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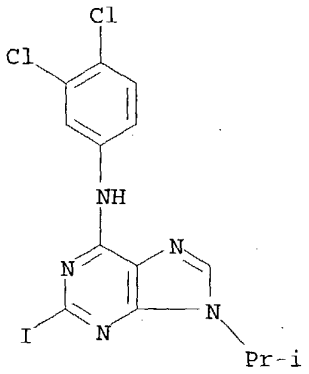
IT **267885-26-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of new C-2 alkynylated purine derivs.)

RN 267885-26-7 HCAPLUS
CN 9H-Purin-6-amine, N-(3,4-dichlorophenyl)-2-iodo-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 39 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:92324 HCAPLUS
DN 132:279164
ED Entered STN: 09 Feb 2000
TI Synthesis and antimicrobial activity of some new 6-substituted 9-arylpurine derivatives
AU Basyouni, W. M.; Hosni, Hanaa M.; Helmy, Samia M.
CS Pesticide Chem. Dept., National Research Centre, Cairo, Egypt
SO Egyptian Journal of Chemistry (1999), 42(6), 587-598
CODEN: EGJCA3; ISSN: 0449-2285
PB National Information and Documentation Centre
DT Journal
LA English
CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 1, 10, 26
AB Starting from 6-chloro-9-(4-methylphenyl)-9H-purine a series of arylpurine derivs., such as (arylpurinyl)thiazolone and (arylpurinyl)pyrazole derivs., were prepared and screened for their antimocrobial, antibacterial and fungicidal activities.
ST arylpurine prepn antimicrobial agent; bactericide arylpurine prepn; fungicide arylpurine prepn; pyrazole arylpurinyl prepn antimicrobial agent; thiazolone arylpurinyl prepn antimicrobial agent
IT Antibacterial agents
Antimicrobial agents
Fungicides
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)
IT **263875-30-5P** 263875-32-7P 263875-34-9P 263875-35-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

IT 263875-28-1P 263875-29-2P 263875-31-6P 263875-37-2P 263875-38-3P
263875-39-4P 263875-40-7P 263875-41-8P 263875-43-0P 263875-44-1P
263875-45-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

IT 74-88-4, Methyl iodide, reactions 79-04-9, Chloroacetyl chloride
98-09-9, Phenylsulfonyl chloride 98-59-9, 4-Methylphenylsulfonyl chloride 103-72-0, Phenyl isothiocyanate 106-49-0,
4-Methylbenzenamine, reactions 110-89-4, Piperidine, reactions
110-91-8, Morpholine, reactions 123-54-6, Acetyl acetone, reactions
302-01-2, Hydrazine, reactions 532-55-8, Benzoyl isothiocyanate
542-85-8, Ethyl isothiocyanate 556-61-6, Methyl isothiocyanate
592-82-5, Butyl isothiocyanate 622-78-6, Benzyl isothiocyanate
123201-00-3, 6-Chloro-9-(4-methylphenyl)-9H-purine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

IT **263875-26-9P** 263875-33-8P 263875-36-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

IT 263875-42-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Abu-Shady, H; Egypt J Pharm Sci 1990, V31, P151 HCAPLUS
(2) Basyouni, W; J Chem Res (S) 1996, V127(M), P801
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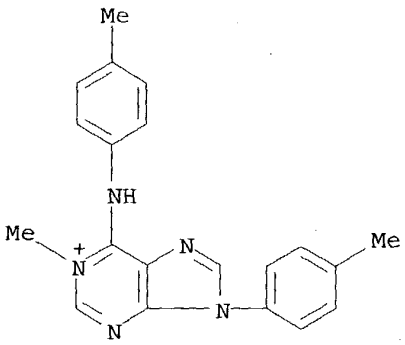
IT **263875-30-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)

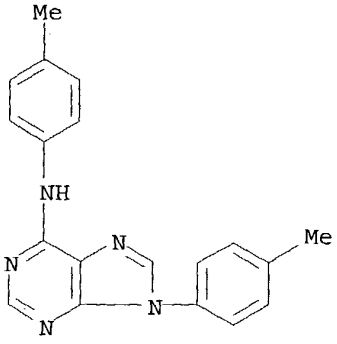
RN 263875-30-5 HCAPLUS

CN 9H-Purinium, 1-methyl-9-(4-methylphenyl)-6-[(4-methylphenyl)amino]-,

iodide (9CI) (CA INDEX NAME)



IT **263875-26-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and antimicrobial activity of 6-substituted 9-arylpurine derivs.)
RN 263875-26-9 HCAPLUS
CN 9H-Purin-6-amine, N,9-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 40 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:819388 HCAPLUS
DN 132:64480
ED Entered STN: 30 Dec 1999
TI Preparation of adenosine derivatives as antiinflammatory agents
IN Bays, David Edmund; Cousins, Richard Peter Charles; Dyke, Hazel Joan; Eldred, Colin David; Judkins, Brian David; Pass, Martin; Pennell, Andrew Michael Kenneth
PA Glaxo Group Ltd., UK
SO PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DT Patent
LA English

IC ICM C07H019-16
ICS A61K031-70
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1, 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9967262	A1	19991229	WO 1999-EP4182	19990621
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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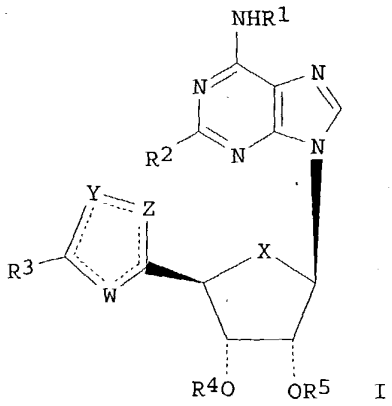
	AU 9945146	A1	20000110	AU 1999-45146	19990621
	AU 758018	B2	20030313		
	BR 9911498	A	20010320	BR 1999-11498	19990621
	EP 1090019	A1	20010411	EP 1999-927999	19990621
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	EE 200000784	A	20020415	EE 2000-784	19990621
	JP 2002518509	T2	20020625	JP 2000-555913	19990621
	JP 3378240	B2	20030217		
	JP 2003040891	A2	20030213	JP 2002-170486	19990621
	NZ 508915	A	20030926	NZ 1999-508915	19990621
	ZA 2000007514	A	20020123	ZA 2000-7514	20001214
	NO 2000006520	A	20010214	NO 2000-6520	20001220
	HR 2000000896	A1	20011231	HR 2000-896	20001221
	BG 105155	A	20010928	BG 2001-105155	20010115
	US 6492348	B1	20021210	US 2001-736018	20010306
	US 2003096788	A1	20030522	US 2002-217107	20020813
	US 6677316	B2	20040113		
PRAI	GB 1998-13554	A	19980623		
	JP 2000-555913	A3	19990621		
	WO 1999-EP4182	W	19990621		
	US 2001-736018	A1	20010306		

OS MARPAT 132:64480
GI



I

AB Adenosine derivs. I (X = O, CH2; Y and Z = O, N, CH, alkylamine; W = heteroatom; R1 = H, alkylcycloalkyl, heterocycle, fused bicyclic, substituted phenyl) which is an agonist at the adenosine A1 and A3 receptors. Thus, (2S,3S,4R,5R)-2-(5-tert-butyl-[1,3,4]oxadiazol-2-yl)-5[6-(tetrahydropyran-4-ylamino)-purin-9-yl]tetrahydrofuran-3,4-diol was prepared as adenosine A1 and A3 receptors (ECR are resp. 4.16 and 152).

ST nucleoside adenosine receptor antiinflammatory prepn

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; preparation of adenosine derivs. as antiinflammatory agents)

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A3; preparation of adenosine derivs. as antiinflammatory agents)

IT Anti-inflammatory agents
(preparation of adenosine derivs. as antiinflammatory agents)

IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of adenosine derivs. as antiinflammatory agents)

IT 77-76-9P, 2,2-Dimethoxypropane 33024-60-1P 253124-31-1P 253124-32-2P
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253124-45-7P 253124-46-8P 253124-47-9P 253124-48-0P 253124-49-1P
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253156-70-6P 253156-71-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of adenosine derivs. as antiinflammatory agents)

IT 75-64-9, tert-Butylamine, reactions 78-81-9, Isobutylamine 78-96-6, 1-Amino-2-propanol 87-42-3, 6-Chloropurine 107-29-9, Acetaldoxime 108-03-2, 1-Nitropropane 108-24-7, Acetic anhydride 110-71-4, DME 123-38-6, Propionaldehyde, reactions 124-63-0, Methanesulfonyl chloride 367-25-9, 2,4-Difluoroaniline 616-24-0, 1-Ethylpropylamine 917-92-0, 3,3-Dimethyl-1-butyne 2592-95-2, 1-Hydroxybenzotriazole 3056-18-6 3182-95-4, (S)-Phenylalaninol 5451-40-1, 2,6-Dichloropurine 6638-79-5, N,O-Dimethylhydroxylamine hydrochloride 7803-49-8, Hydroxylamine, reactions 7803-57-8, Hydrazine hydrate 13552-21-1, 1-Amino-2-butanol 14169-12-1 16357-59-8 25952-53-8, EDAP 28440-13-3 42826-42-6 42956-75-2, tert-Butylamidoxime 57946-56-2, 4-Chloro-2-fluoro-aniline 68327-04-8 68673-90-5 74213-24-4, Dibromoformaldoxime 75003-90-6 87120-72-7 91893-69-5 97716-24-0 108661-54-7 120355-42-2
253127-10-5 **253127-11-6** 253127-12-7 253127-13-8
253127-14-9 253127-15-0 **253127-16-1** 253127-17-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of adenosine derivs. as antiinflammatory agents)

IT 235744-80-6P 235744-81-7P 235744-82-8P 235745-12-7P 252760-72-8P
252760-73-9P 252760-74-0P 252760-75-1P 252760-76-2P 252760-77-3P
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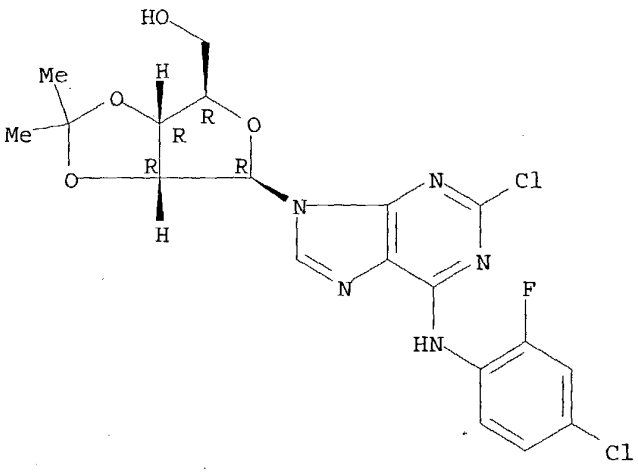
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of adenosine derivs. as antiinflammatory agents)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Choi Sledeski Yong MI; WO 9801426 A 1998 HCAPLUS
(2) Geden Joanna Victoria; WO 9828319 A 1998 HCAPLUS
(3) Novonordisk As; WO 9801459 A 1998 HCAPLUS
(4) Novonordisk As; WO 9816539 A 1998 HCAPLUS

IT **253127-11-6 253127-16-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of adenosine derivs. as antiinflammatory agents)

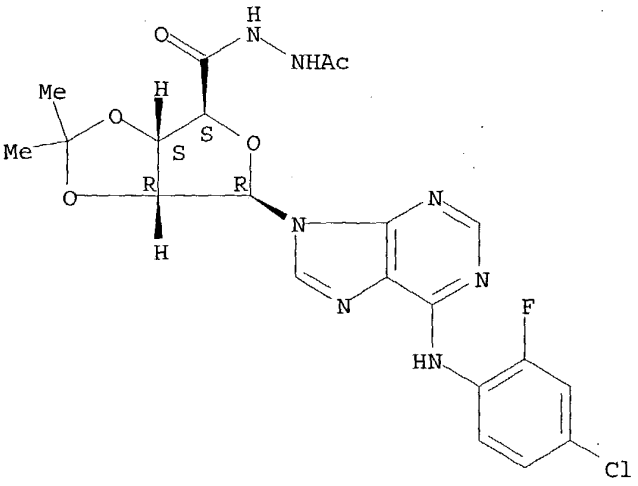
RN 253127-11-6 HCAPLUS
CN Adenosine, 2-chloro-N-(4-chloro-2-fluorophenyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



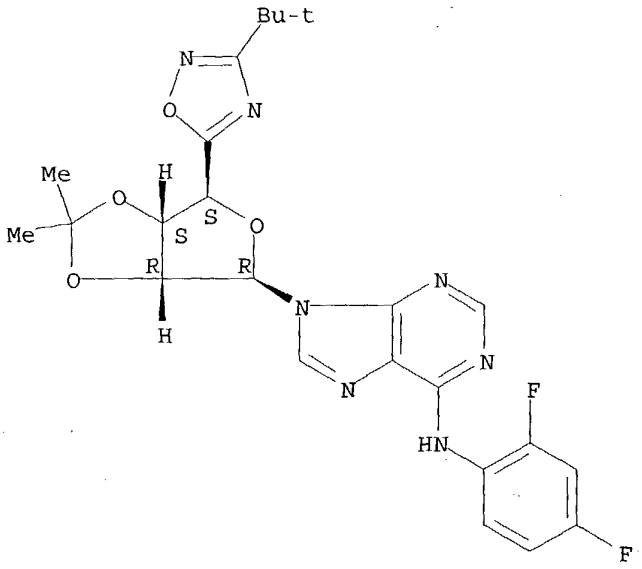
RN 253127-16-1 HCAPLUS
CN β-D-Ribofuranuronic acid, 1-[6-[(4-chloro-2-fluorophenyl)amino]-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, 2-acetylhydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



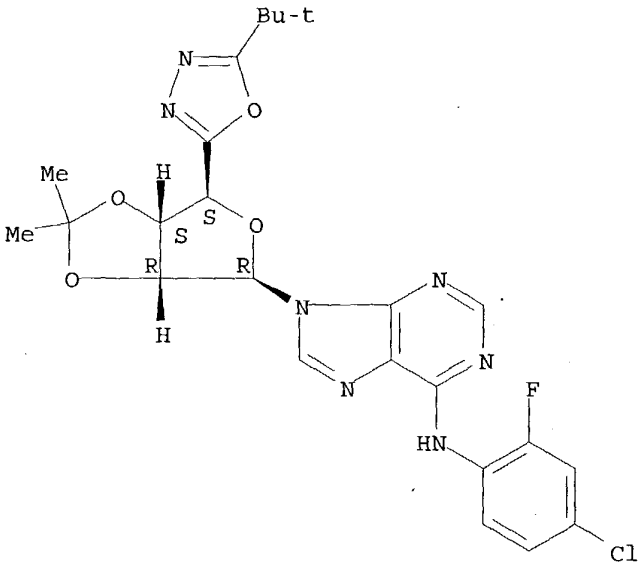
IT **253126-92-0P 253127-02-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253126-92-0 HCAPLUS
CN 9H-Purin-6-amine, N-(2,4-difluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[3-(1,1-dimethylethyl)-1,2,4-oxadiazol-5-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253127-02-5 HCAPLUS
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 41 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:468483 HCAPLUS
DN 131:82944
ED Entered STN: 30 Jul 1999
TI Methods of using chemical libraries to search for new kinase inhibitors

IN Gray, Nathanael S.; Schultz, Peter; Wodicka, Lisa; Meijer, Laurent; Lockhart, David J.
PA The Regents of the University of California, USA; Affymetrix; Centre National de la Recherche Scientifique
SO PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-68
ICS A61K031-52; C12Q001-48; C07D473-00
CC 1-1 (Pharmacology)
Section cross-reference(s): 28
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9934018	A1	19990708	WO 1998-US27405	19981223
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6573044	B1	20030603	US 1998-221406	19981222
AU 9920103	A1	19990719	AU 1999-20103	19981223
EP 1042509	A1	20001011	EP 1998-964881	19981223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1997-68798P P 19971224
US 1997-55400P P 19970807
WO 1998-US27405 W 19981223
OS MARPAT 131:82944
AB The generation of selective inhibitors for specific protein kinases would provide new tools for analyzing signal transduction pathways and possibly new therapeutic agents. We have invented an approach to the development of selective protein kinase inhibitors based on the unexpected binding mode of 2,6,9-trisubstituted purines to the ATP binding site of human CDK2. The most potent inhibitor, purvalanol B (IC50 = 6 nM), binds with a 30-fold greater affinity than the known CDK2 inhibitor, flavopiridol. The cellular effects of this class of compds. were examined and compared to those of flavopiridol by monitoring changes in mRNA expression levels for all genes in treated cells of Saccharomyces cerevisiae using high-d. oligonucleotide probe arrays.
ST chem library kinase inhibitor identification; purvalanol CDK2 kinase inhibitor identification; oligonucleotide array gene expression kinase inhibitor
IT Crystal structure
(cdk2-purvalanol B; chemical libraries in search for kinase inhibitors)
IT Gene
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cell proliferation-associated protein-encoding; chemical libraries in search
for kinase inhibitors)
IT Cell proliferation
Cytotoxic agents
Drug resistance
Drug screening

Nucleic acid hybridization
Saccharomyces cerevisiae
(chemical libraries in search for kinase inhibitors)
IT Oligonucleotides
mRNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(chemical libraries in search for kinase inhibitors)
IT Intestine, neoplasm
Intestine, neoplasm
(colon, inhibitors; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
(colon; chemical libraries in search for kinase inhibitors)
IT RNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complementary; chemical libraries in search for kinase inhibitors)
IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(drug resistance-associated; chemical libraries in search for kinase inhibitors)
IT Gene
(expression; chemical libraries in search for kinase inhibitors)
IT Kidney, neoplasm
Kidney, neoplasm
(inhibitors; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
Antitumor agents
(kidney; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
(leukemia; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
(lung non-small-cell carcinoma; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
(mammary gland; chemical libraries in search for kinase inhibitors)
IT Mammary gland
Mammary gland
Prostate gland
Prostate gland
(neoplasm, inhibitors; chemical libraries in search for kinase inhibitors)
IT Lung, neoplasm
Lung, neoplasm
(non-small-cell carcinoma, inhibitors; chemical libraries in search for kinase inhibitors)
IT Proliferation inhibition
(proliferation inhibitors; chemical libraries in search for kinase inhibitors)
IT Antitumor agents
(prostate gland; chemical libraries in search for kinase inhibitors)
IT 52660-18-1
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(1 and 2; chemical libraries in search for kinase inhibitors)
IT 9059-09-0, Glycogen synthase kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(3; chemical libraries in search for kinase inhibitors)
IT 229966-55-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chemical libraries in search for kinase inhibitors)

IT 120-73-0D, Purine, derivs. 101622-51-9, Olomoucine 146426-40-6, Flavopiridol 190654-60-5, NG 65 199986-75-9, NG 26 199987-14-9, NG 49 203436-32-2, NG 16 212779-48-1, NG 52 212844-53-6, NG 60 **212844-54-7**, NG 95 220696-56-0, NG 42 220696-57-1, NG 43 220790-91-0, NG 64 220791-04-8, NG 44 220791-08-2, NG 45 220791-11-7, NG 46 220791-16-2, NG 47 220791-21-9, NG 50 220791-22-0, NG 51 220791-23-1, NG 53 220791-27-5, NG 54 220791-29-7, NG 76 220791-34-4, NG 75 220791-38-8, NG 33 220791-42-4, NG 36 220791-52-6, NG 40 220791-65-1, NG 35 220792-00-7, NG 56 220792-08-5, NG 57 220792-35-8, NG 59 220792-49-4, NG 62 220792-55-2, NG 96 220792-57-4, NG 97 220792-60-9, NG 98 220792-62-1, NG 94 220793-09-9 220793-19-1, NG 61
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemical libraries in search for kinase inhibitors)

IT 88201-45-0, Insulin receptor tyrosine kinase 137632-07-6, Erk1 protein kinase 141436-78-4, Protein kinase C 141588-27-4 142008-29-5, CAMP-dependent protein kinase 143375-65-9, Cdc28 protein kinase 144378-32-5, Gene cdc2 kinase (cyclin B) 145539-88-4, v-Abl tyrosine kinase 146279-88-1, Cdk2-cyclin A kinase 146279-89-2, Cdk2-cyclin E kinase 147014-96-8, Cdk5 kinase 150428-23-2, Cyclin-dependent kinase 155215-87-5, c-Jun amino-terminal kinase 166433-53-0, Cdk4-cyclin D1 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(chemical libraries in search for kinase inhibitors)

IT 141349-86-2D, Cdk2 kinase, purvalanol B complexes **212844-54-7D**, Purvalanol B, cdk2 kinase complexes
RL: PRP (Properties)
(chemical libraries in search for kinase inhibitors)

IT 220696-58-2P 229966-54-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction; chemical libraries in search for kinase inhibitors)

IT 67-63-0, 2-Propanol, reactions 108-42-9, 3-Chloroaniline 1651-29-2, 2-Fluoro-6-chloropurine 2026-48-4, 1-Butanol, 2-amino-3-methyl-, (S)-
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; chemical libraries in search for kinase inhibitors)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Havlicek, L; JOURNAL OF MEDICINAL CHEMISTRY 1997, V4(40), P408
(2) Mansuri, M; WO 9716447 A 1997 HCAPLUS
(3) Mark, C; WO 9727317 A 1997 HCAPLUS
(4) Pfizer; EP 0534640 A 1993 HCAPLUS
(5) Squibb Bristol Myers Co; WO 9742949 A 1997 HCAPLUS
(6) Univ California; WO 9528169 A 1995 HCAPLUS
(7) Vesely, J; EUROPEAN JOURNAL OF BIOCHEMISTRY 1994, V224(2), P771 HCAPLUS

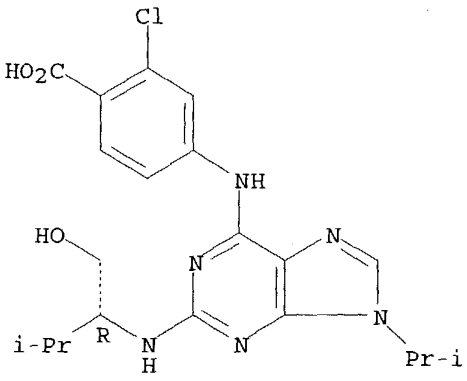
IT **212844-54-7**, NG 95
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemical libraries in search for kinase inhibitors)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-

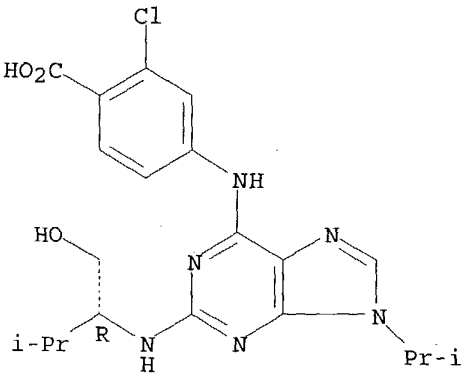
methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 kinase complexes
RL: PRP (Properties)
(chemical libraries in search for kinase inhibitors)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 42 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:425805 HCAPLUS
DN 131:54006
ED Entered STN: 09 Jul 1999
TI Exploiting genomics in the search for new drugs
IN Lockhart, David J.; Wodicka, Lisa; Ho, Ming Hsui
PA Affymetrix, USA
SO PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-68

ICS C07D473-16
CC 1-1 (Pharmacology)
Section cross-reference(s): 3
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9932660	A1	19990701	WO 1998-US26925	19981218
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9919268	A1	19990712	AU 1999-19268	19981218
	EP 1040204	A1	20001004	EP 1998-964070	19981218
	EP 1040204	B1	20040303		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6333155	B1	20011225	US 1998-215207	19981218
	US 2001055771	A1	20011227	US 2001-900845	20010706
	US 6524800	B2	20030225		
	US 2003180774	A1	20030925	US 2003-370717	20030224
PRAI	US 1997-68289P	P	19971219		
	US 1998-215207	A3	19981218		
	WO 1998-US26925	W	19981218		
	US 2001-900845	A3	20010706		

AB The cellular effects of potentially therapeutic compds. are characterized in mammalian cells and yeast. In the latter case, the effects can be characterized on a genome-wide scale by monitoring changes in mRNA levels in treated cells with high-d. oligonucleotide probe arrays.

ST genomics drug screening animal cell yeast; oligonucleotide probe mRNA genomics drug screening

IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A, complexes, with gene cdk2 phosphoprotein; genomics in search for new drugs)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ACH1; genomics in search for new drugs)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ATR1; genomics in search for new drugs)

IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(B, complexes, with gene cdc2 phosphoprotein; genomics in search for new drugs)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CDC28; genomics in search for new drugs)

IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(CLB1; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CLB2; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CTS1; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CTT1; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(CYC3; genomics in search for new drugs)
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(D1, Cdk4-cyclin D1 kinase; genomics in search for new drugs)
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(E, complexes, with gene cdk2 phosphoprotein; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(EGT2; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(FAR1; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(GPH1; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(GSC2; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HAC1; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HAP4; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HSP104; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HSP12; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(HSP26; genomics in search for new drugs)
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(HSP42; genomics in search for new drugs)
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(HSP82; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HTA2; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HTB2; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HXT5; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ILV6; genomics in search for new drugs)
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(PCK1; genomics in search for new drugs)
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(PCL5; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PDR10; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PDR15; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PGM2; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PHO5; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PHO80; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PHO84; genomics in search for new drugs)
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(PHO8; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(SSE2; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(TFS1; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(UBI4; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YAL061W; genomics in search for new drugs)
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(YBR147W; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YBR214w; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YBR296c; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YDL223c; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YDR281C; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YER037w; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YER150w; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YGL121C; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(YGL179C; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YGR043C; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YHR143W; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YKL071w; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YLR311C; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YNR009W; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YOL155C; genomics in search for new drugs)
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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(YOR248w; genomics in search for new drugs)
IT Gene, microbial
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ZMS1; genomics in search for new drugs)
IT Intestine, neoplasm
Intestine, neoplasm
(colon, inhibitors; genomics in search for new drugs)
IT Antitumor agents
(colon; genomics in search for new drugs)
IT RNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complementary; genomics in search for new drugs)
IT Gene
(expression; genomics in search for new drugs)
IT Yeast
(genes, and human genes; genomics in search for new drugs)
IT Drug screening
Immobilization, biochemical
Mutation
Nucleic acid hybridization
Saccharomyces cerevisiae
Transcription, genetic
(genomics in search for new drugs)
IT Gene
Insulin receptors
Proteins, general, biological studies
RNA
cDNA
mRNA

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(genomics in search for new drugs)
IT Probes (nucleic acid)
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(genomics in search for new drugs)
IT Crystal structure
(human cdk2-purvalanol complex; genomics in search for new drugs)
IT Kidney, neoplasm
Kidney, neoplasm
(inhibitors; genomics in search for new drugs)
IT Antitumor agents
Antitumor agents
(kidney; genomics in search for new drugs)
IT Antitumor agents
(leukemia; genomics in search for new drugs)
IT Antitumor agents
(lung non-small-cell carcinoma; genomics in search for new drugs)
IT Antitumor agents
(mammary gland; genomics in search for new drugs)
IT Mammary gland
Mammary gland
Prostate gland
Prostate gland
(neoplasm, inhibitors; genomics in search for new drugs)
IT Lung, neoplasm
Lung, neoplasm
(non-small-cell carcinoma, inhibitors; genomics in search for new drugs)
IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(p35, cdk5-p35 kinase; genomics in search for new drugs)
IT Antitumor agents
(prostate gland; genomics in search for new drugs)
IT 52660-18-1
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(1; genomics in search for new drugs)
IT 9059-09-0, Glycogen synthase kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(3; genomics in search for new drugs)
IT 141349-86-2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complexes, with cyclin A or cyclin E; genomics in search for new drugs)
IT 143375-65-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(complexes, with cyclin B; genomics in search for new drugs)
IT 101622-51-9, Olomoucine 146426-40-6, Flavopiridol 212779-48-1 212779-49-2 212844-53-6, Purvalanol A **212844-54-7**, Purvalanol B
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(genomics in search for new drugs)

IT 88201-45-0, Insulin receptor tyrosine kinase 137632-07-6 137632-07-6, Erk1 kinase 141588-27-4 142008-29-5, CAMP-dependent protein kinase 142805-58-1 143375-65-9, Cdc28p kinase 144378-32-5, Cdc2-cyclin B kinase 146279-88-1, Cdk2-cyclin A kinase 147014-96-8 155215-87-5, c-Jun amino-terminal kinase 159940-50-8 166433-53-0, Cdk4-cyclin D1 kinase 205395-26-2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(genomics in search for new drugs)

IT 56-65-5D, Adenosine triphosphate, cdk2 complexes 101622-51-9D, Olomoucine, cdk2 complexes 146426-40-6D, Flavopiridol, cdk2 complexes 186692-46-6D, Roscovitine, cdk2 complexes **212844-54-7D**, Purvalanol B, cdk2 complexes
RL: PRP (Properties)
(genomics in search for new drugs)

IT 9031-44-1, Kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; genomics in search for new drugs)

IT 141436-78-4, Protein kinase C
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(isoforms; genomics in search for new drugs)

IT 146279-89-2, Cdk2-cyclin E kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(with gene cdk2 phosphoprotein; genomics in search for new drugs)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

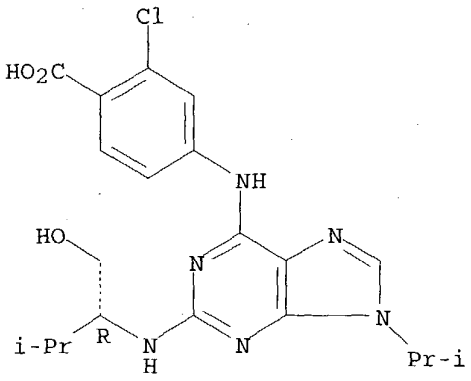
(1) Chee, M; WO 9727317 A 1997 HCAPLUS
(2) De Azevedo, W; EUROPEAN JOURNAL OF BIOCHEMISTRY 1997, V243(1/02), P518
(3) Konig, A; BLOOD 1997, V90(11), P4307 HCAPLUS
(4) Lockhart; BIO/TECHNOLOGY 1996, V14, P1675 HCAPLUS
(5) Schow, S; BIOORGANIC & MEDICINAL CHEMISTRY LETTERS 1997, V7(21), P2697 HCAPLUS

IT **212844-54-7**, Purvalanol B
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(genomics in search for new drugs)

RN 212844-54-7 HCAPLUS

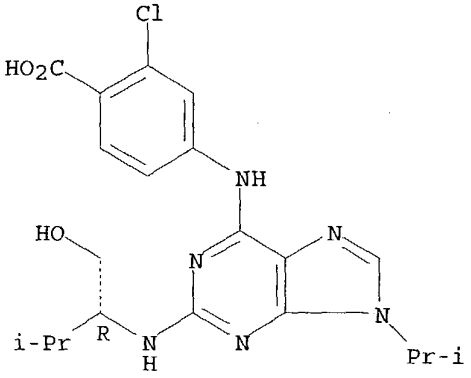
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 complexes
RL: PRP (Properties)
(genomics in search for new drugs)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 43 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:397364 HCAPLUS
DN 131:228582
ED Entered STN: 29 Jun 1999
TI Synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors
AU Chang, Young-Tae; Gray, Nathanael S.; Rosania, Gustavo R.; Sutherlin, Daniel P.; Kwon, Soojin; Norman, Thea C.; Sarohia, Radhika; Leost, Maryse; Meijer, Laurent; Schultz, Peter G.
CS Lawrence Berkeley National Laboratory and the Howard Hughes Medical Institute, Department of Chemistry, University of California, Berkeley, CA, 94720, USA
SO Chemistry & Biology (1999), 6(6), 361-375
CODEN: CBOLE2; ISSN: 1074-5521
PB Current Biology Publications
DT Journal

LA English
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 7
AB Purines constitute a structural class of protein ligands involved in mediating an astonishing array of metabolic processes and signal pathways in all living organisms. Synthesis of purine derivs. targeting specific purine-binding proteins in vivo could lead to versatile lead compds. for use as biol. probes or drug candidates. We synthesized several libraries of 2,6,9-trisubstituted purines using both solution- and solid-phase chemical, and screened the compds. for inhibition of cyclin-dependent kinase (CDK) activity and human leukemic cell growth. Lead compds. were optimized by iterative synthesis based on structure-activity relationships (SARs), as well as anal. of several CDK-inhibitor cocrystal structures, to afford several interesting compds. including one of the most potent CDK inhibitors known to date. Unexpectedly, some compds. with similar CDK inhibitory activity arrested cellular proliferation at distinctly different phases of the cell cycle, and another inhibitor directly induced apoptosis, bypassing cell-cycle arrest. Some of these compds. selectively inhibited growth of cells derived from specific tumors. 2,6,9-Trisubstituted purines have various and potent biol. activities, despite high concns. of competing endogenous purine ligands in living cells. Purine libraries constitute a versatile source of small mols. that affect distinct biochem. pathways mediating different cellular functions.
ST purine trisubstituted CDK inhibitor combinatorial library; structure activity relationship trisubstituted purine CDK inhibitor; leukemic inhibitor trisubstituted purine combinatorial library; apoptosis induction trisubstituted purine; cellular proliferation trisubstituted purine
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A, complexes, with gene cdk2 phosphoprotein; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(E, complexes, with gene cdk2 phosphoprotein; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Structure-activity relationship
(antitumor; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Structure-activity relationship
(enzyme-inhibiting; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Apoptosis
(induction; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Structure-activity relationship
(leukemia-inhibition; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Antitumor agents
(leukemia; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Antitumor agents
Combinatorial library
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT Purine bases
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT Insulin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 52660-18-1, Casein kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(1 and 2; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 141436-78-4, Protein kinase c
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(multiple forms; synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 190654-60-5P 199986-74-8P 199986-75-9P 199986-90-8P 199986-95-3P
199987-14-9P 199987-36-5P 203436-23-1P 203436-24-2P 203436-32-2P
212779-48-1P 212844-53-6P **212844-54-7P** 220696-56-0P
220696-57-1P 220790-91-0P 220791-04-8P 220791-08-2P 220791-11-7P
220791-16-2P 220791-21-9P 220791-22-0P 220791-23-1P 220791-27-5P
220791-29-7P 220791-34-4P 220791-38-8P 220791-42-4P 220791-52-6P
220792-35-8P 220792-55-2P 220792-57-4P 220792-60-9P 220792-62-1P
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244030-37-3P 244030-38-4P 244030-40-8P 244030-42-0P 244030-43-1P
244030-44-2P 244030-45-3P 244030-46-4P 244030-47-5P 244030-48-6P
244030-49-7P 244030-50-0P 244030-51-1P 244030-52-2P 244030-53-3P
244030-54-4P 244030-55-5P 244030-56-6P 244030-57-7P 244030-58-8P
244030-59-9P 244030-60-2P 244030-61-3P 244030-62-4P 244030-63-5P
244030-64-6P 244030-65-7P 244030-66-8P 244030-67-9P 244030-68-0P
244030-69-1P 244030-70-4P 244030-71-5P 244030-72-6P 244030-73-7P
244030-74-8P 244030-75-9P 244030-76-0P 244030-77-1P 244030-78-2P
244030-79-3P 244030-80-6P 244030-81-7P 244030-82-8P 244030-83-9P
244030-85-1P 244030-86-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 88201-45-0, Insulin receptor tyrosine kinase 137632-07-6 137632-08-7
139691-76-2, c-Raf kinase 141588-27-4, Protein kinase G 142008-29-5, Protein kinase A 142805-58-1 144378-32-5, Cyclin B-CDK1 kinase
146279-88-1, Cdk2-cyclin A kinase 146279-89-2, Cdk2-cyclin E kinase
147014-96-8
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 1651-29-2, 2-Fluoro-6-chloropurine 4276-09-9, (R)-(-)-2-Amino-3-methyl-1-butanol 10310-21-1, 2-Amino-6-chloropurine
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)

IT 220696-58-2P, 2-Fluoro-6-chloro-9-isopropylpurine 229966-54-5P, 2-Fluoro-6-(3-chloroanilino)-9-isopropylpurine 244030-27-1P, 2-Fluoro-6-chloro-9-[(2-(trimethylsilyl)ethoxy)methyl]purine
244030-28-2P, 2-Amino-6-chloro-9-isopropylpurine 244030-29-3P

244030-30-6P 244030-31-7P 244030-32-8P 244030-33-9P 244030-84-0P,
2-(Trifluoroacetamido)-6-chloro-9-isopropylpurine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
IT 244030-87-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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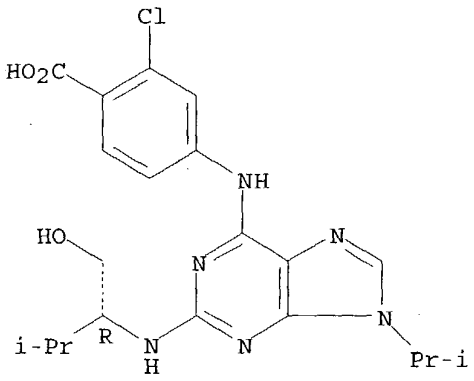
IT **212844-54-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and application of functionally diverse 2,6,9-trisubstituted purine libraries as CDK inhibitors)
RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 44 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:325952 HCAPLUS
DN 130:325350
ED Entered STN: 27 May 1999
TI Preparation of nucleosides as adenosine A1 receptors
IN Eldred, Colin David; Pennell, Andrew Michael Kenneth
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H019-00
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9924451	A2	19990520	WO 1998-EP7023	19981106
	WO 9924451	A3	19990819		
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	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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	AU 9916665	A1	19990531	AU 1999-16665	19981106
	AU 763414	B2	20030724		
	EP 1030856	A2	20000830	EP 1998-961132	19981106
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	EE 200000283	A	20010815	EE 2000-20000028319981106	
	JP 2001522859	T2	20011120	JP 2000-520459	19981106
	NZ 504336	A	20021126	NZ 1998-504336	19981106
	NO 2000002359	A	20000705	NO 2000-2359	20000505
	HR 2000000277	A1	20001031	HR 2000-277	20000508
	US 6544960	B1	20030408	US 2000-530575	20000615
	US 2003158146	A1	20030821	US 2003-373064	20030226
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WO 1998-EP7023 W 19981106
US 2000-530575 A1 20000615
OS MARPAT 130:325350
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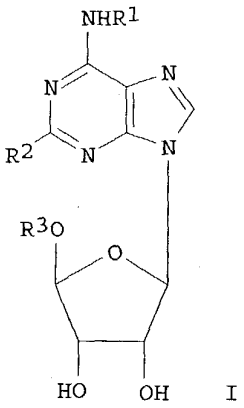

I

AB Nucleosides I which are agonists at the adenosine A1 receptor wherein R1 represents cycloalkyl, heterocyclic,alkyl, bicyclic heterocycle, aryl; R2 represents C1-3 alkyl, halogen or hydrogen; R3 represents a fluorinated straight or branched alkyl group of 1-6 carbon atoms and salts and solvates thereof, in particular, physiol. acceptable solvates and salts thereof. These compds. are agonists at the Adenosine A1 receptor. Thus, 5'-O-methyl-N-(tetrahydro-furan-3R-yl)-adenosine was prepared and tested as adenosine A1 receptor (equipotent concentration ratio relative to NECA = 2.70).

ST nucleoside prepn adenosine receptor

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A1; preparation of nucleosides as adenosine A1 receptors)

IT Adenosine receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A3; preparation of nucleosides as adenosine A1 receptors)

IT Nucleosides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleosides as adenosine A1 receptors)

IT 223756-74-9P 223756-75-0P 223756-76-1P 223756-77-2P 223756-78-3P
223756-79-4P 223756-80-7P 223756-81-8P 223756-82-9P 223756-83-0P
223756-84-1P 223756-85-2P 223756-86-3P 223756-87-4P 223756-88-5P
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223757-03-7P 223757-04-8P 223757-05-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nucleosides as adenosine A1 receptors)

IT 619-45-4, Methyl 4-aminobenzoate 6670-90-2 33985-44-3 39824-26-5
68327-11-7 199449-24-6 223756-94-3 223757-01-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nucleosides as adenosine A1 receptors)

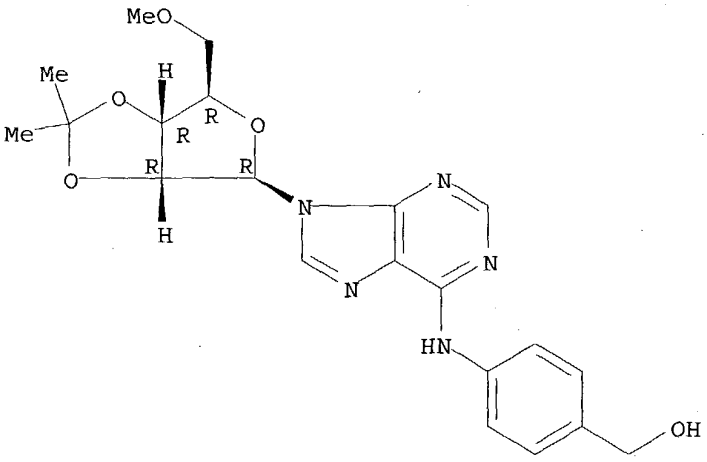
IT 199449-15-5P 199449-16-6P 199449-17-7P 199449-21-3P 199449-22-4P
199449-23-5P 223756-62-5P 223756-63-6P 223756-64-7P 223756-65-8P
223756-66-9P **223756-68-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleosides as adenosine A1 receptors)

IT **223756-68-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nucleosides as adenosine A1 receptors)

RN 223756-68-1 HCAPLUS

CN Adenosine, N-[4-(hydroxymethyl)phenyl]-5'-O-methyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 45 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:306503 HCAPLUS

DN 131:97125

ED Entered STN: 19 May 1999

TI A cyclin-dependent kinase inhibitor inducing cancer cell differentiation: biochemical identification using Xenopus egg extracts

AU Rosania, Gustavo R.; Merlie, John, Jr.; Gray, Nathanael; Chang, Young-Tae; Schultz, Peter G.; Heald, Rebecca

CS Department of Chemistry and Howard Hughes Medical Institute, University of California, Berkeley, CA, 94720, USA

SO Proceedings of the National Academy of Sciences of the United States of America (1999), 96(9), 4797-4802
CODEN: PNASA6; ISSN: 0027-8424

PB National Academy of Sciences

DT Journal

LA English

CC 1-6 (Pharmacology)

AB Cellular differentiation is a complex process involving growth arrest, exit from the cell cycle, and expression of differentiated cell-type-specific functions. To identify small mols. promoting this process, a chemical library was screened by using a myeloid leukemic cell line that retained the potential to differentiate in culture. In the presence of a purine derivative, aminopurvalanol (AP), cells acquired phenotypic characteristics of differentiated macrophages and became

arrested in the cell cycle with a 4N DNA content. AP also inhibited mitosis in Xenopus egg exts., suggesting that it acted on an evolutionarily conserved cell cycle regulatory pathway. Affinity chromatog. and biochem. reconstitution expts. with Xenopus egg exts. identified cyclin-dependent kinase (CDK) 1-cyclin B as a target of the compound Although AP potently inhibited immunoppts. of both human CDK1 and CDK2 from human leukemic cell exts., our results indicate that the compound preferentially targets the G2/M-phase transition in vivo.

ST aminopurvalanol cancer cell differentiation cyclin kinase; antitumor aminopurvalanol prepn cyclin kinase

IT Interphase (cell cycle)
(G2-phase, G2/M-phase transition; preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT Cyclin dependent kinase inhibitors
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT 220792-57-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT 141349-86-2, Cyclin-dependent kinase 2 143375-65-9, Cyclin-dependent kinase 1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT 1651-29-2 2457-76-3, 4-Amino-2-chlorobenzoic acid 4276-09-9 33786-89-9, 5-Chloro-1,3-phenylenediamine 220696-58-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT **212844-54-7P 231951-16-9P 231951-17-0P 231951-18-1P** 231951-19-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

IT 231951-20-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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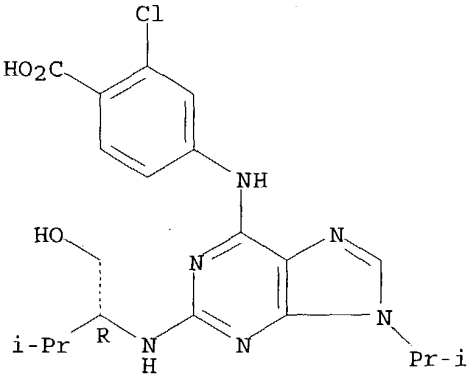
IT **212844-54-7P 231951-16-9P 231951-17-0P**
231951-18-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cyclin-dependent kinase inhibitor inducing cancer cell differentiation)

RN 212844-54-7 HCAPLUS
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 231951-16-9 HCAPLUS
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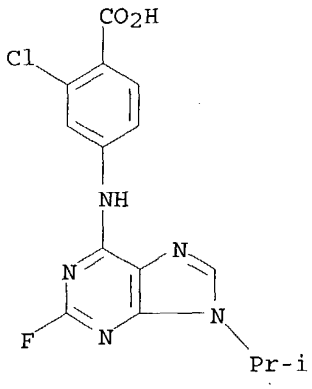
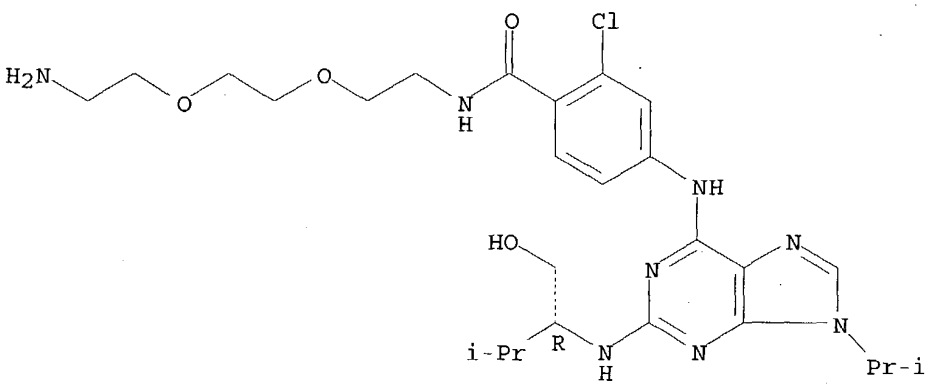
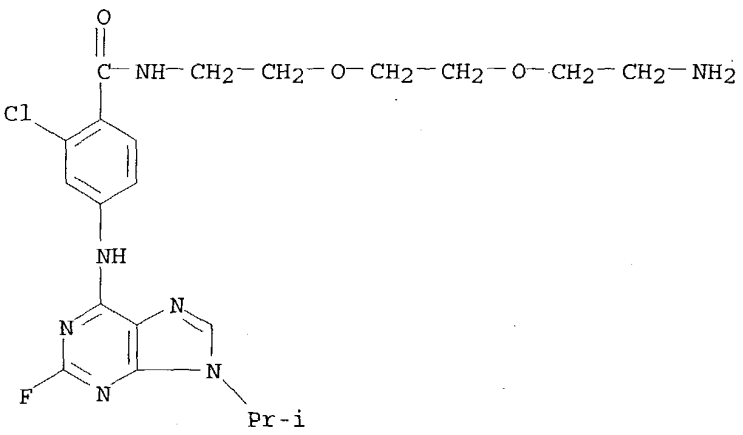


RN 231951-17-0 HCAPLUS
CN Benzamide, N-[2-[2-(2-aminoethoxy)ethoxy]ethyl]-2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 231951-18-1 HCAPLUS
CN Benzamide, N-[2-[2-(2-aminoethoxy)ethoxy]ethyl]-2-chloro-4-[[2-fluoro-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)



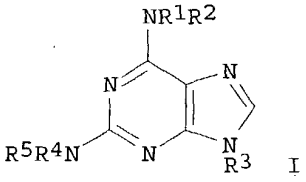
L31 ANSWER 46 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:126901 HCAPLUS
DN 130:196532
ED Entered STN: 26 Feb 1999
TI Preparation of purine derivatives as inhibitor of protein kinases, G-proteins and polymerases
IN Gray, Nathanael S.; Schultz, Peter; Kim, Sung-Hou; Meijer, Laurent
PA The Regents of the University of California, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D473-16
ICS C07D487-04; A61K031-52
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1, 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9907705	A1	19990218	WO 1998-US16388	19980806
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9887730	A1	19990301	AU 1998-87730	19980806
	AU 735127	B2	20010628		
	EP 1003746	A1	20000531	EP 1998-939261	19980806
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6255485	B1	20010703	US 1998-130255	19980806
	JP 2001516694	T2	20011002	JP 2000-506208	19980806
	US 6573044	B1	20030603	US 1998-221406	19981222
	US 2003114672	A1	20030619	US 2001-847007	20010501
	US 6617331	B2	20030909		
	US 2003176699	A1	20030918	US 2003-352752	20030127
PRAI	US 1997-55400P	P	19970807		

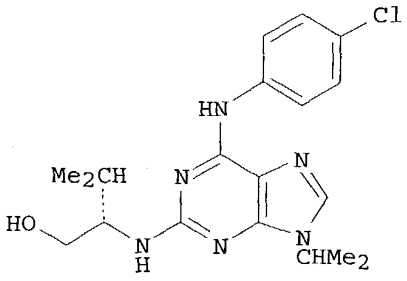
	US 1997-68798P	P	19971224
	US 1998-130255	A1	19980806
	WO 1998-US16388	W	19980806
	US 2001-847007	A1	20010501

OS MARPAT 130:196532

GI



I



II

AB The purine analogs I (R1, R2, R3, R4, R5 are independently members selected from the group consisting of H, C1-C8 straight-chain, branched-chain, saturated and unsatd. alkyl, C1-C8 straight-chain, branched-chain, saturated and unsatd. substituted alkyl, aryl and substituted aryl) or a pharmaceutically acceptable salt thereof were prepared for inhibition of inter alia, protein kinases, G-proteins and polymerases. In addition, the present invention relates to methods of using such purine analogs to inhibit protein kinases, G-proteins, polymerases and other cellular processes and to treat cellular proliferative diseases. Thus, 2-fluoro-6-chloropurine was alkylated with 2-propanol followed by amination with 3-chloroaniline and then S-2-amino-3-methyl-1-butanol to give the purine II.

ST purine prepn protein kinase inhibitor; G protein inhibitor purine prepn; polymerase inhibitor purine prepn

IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(B; preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT Antitumor agents
Cell proliferation
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT G proteins (guanine nucleotide-binding proteins)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT 190654-60-5P, NG 65 199986-75-9P, NG 26 199987-14-9P, NG 49
203436-32-2P, NG 16 212779-48-1P, NG 52 212844-53-6P, NG 60
212844-54-7P, NG 95 220696-56-0P, NG-42 220696-57-1P, NG-43
220790-91-0P, NG 64 220791-04-8P, NG 44 220791-08-2P, NG 45
220791-11-7P, NG 46 220791-16-2P, NG 47 220791-21-9P, NG 50
220791-22-0P, NG 51 220791-23-1P, NG 53 220791-27-5P, NG 54
220791-29-7P, NG 76 220791-34-4P, NG 75 220791-38-8P, NG 33
220791-42-4P, NG 36 220791-52-6P, NG 40 220791-65-1P, NG 35
220792-00-7P, NG 56 220792-08-5P, NG 57 220792-35-8P, NG 59
220792-49-4P, NG 62 220792-55-2P, NG 96 220792-57-4P, NG 97
220792-60-9P, NG 98 220792-62-1P, NG 94 220793-09-9P, NG 30

220793-19-1P, NG 61
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT 9026-43-1, Protein kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT 108-42-9, 3-Chloroaniline 1651-29-2 2026-48-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

IT 220696-58-2P **220696-59-3P** 220696-60-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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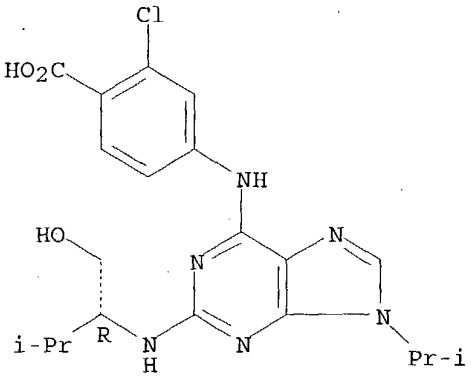
(9) Zimmermann, J; WO 9716452 A 1997 HCAPLUS

IT **212844-54-7P**, NG 95
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

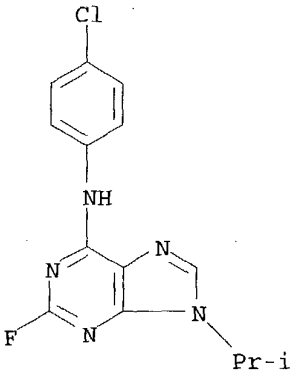
RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **220696-59-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 220696-59-3 HCAPLUS
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 47 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:52826 HCAPLUS
DN 130:246297
ED Entered STN: 26 Jan 1999
TI 2,6,9-Trisubstituted purines: optimization towards highly potent and selective CDK1 inhibitors
AU Imbach, Patricia; Capraro, Hans-Georg; Furet, Pascal; Mett, Helmut; Meyer, Thomas; Zimmermann, Jurg
CS Novartis Pharmaceuticals, Therapeutic Area Oncology, Novartis Limited, Basel, CH-4002, Switz.
SO Bioorganic & Medicinal Chemistry Letters (1999), 9(1), 91-96
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
CC 1-3 (Pharmacology)

AB Novel 2,6,9-substituted purine derivs. represent a class of potent and selective inhibitors of CDK1/cyclin B. The synthesis, SAR and biol. profile of selected compds. are described. The high enzymic potency was observed for all combinations of C(2)-1,4-trans-hydroxy-cyclohexylamine substitution with an aniline at C(6); all these compds. have IC50 values in the low nanomolar range (28-90 nM). Other potent combinations were found with trans and cis-1,4-diaminocyclohexylamine. Concerning the anilines, the best enzymic activities were obtained with p-fluoro, p-trifluoromethyl or m-chloro substitution, resp. Also, the selectivity against PKCα, PKA, and EGF was achieved by a factor 10-100.

ST purine deriv CDK1 kinase inhibitor

IT Cyclins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B, inhibitors; optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT Structure-activity relationship
(enzyme-inhibiting; optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT 190653-71-5P 190653-78-2P 190654-57-0P 190654-61-6P
190654-65-0P 221616-99-5P 221617-02-3P 221617-03-4P
221617-04-5P 221617-07-8P 221617-10-3P 221617-13-6P 221617-15-8P
221617-17-0P 221617-19-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT 143375-65-9, CDK1 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT 108-42-9, 3-Chloroaniline 5451-40-1, 2,6-Dichloropurine
RL: RCT (Reactant); RACT (Reactant or reagent)
(optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT 190654-77-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

IT 62229-50-9, Epidermal growth factor 142008-29-5, Protein kinase A
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(optimization of substituted purines towards highly potent and selective protein kinase inhibitors)

IT 141436-78-4, Protein kinase C
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(α; optimization of substituted purines towards highly potent and selective protein kinase inhibitors)

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD

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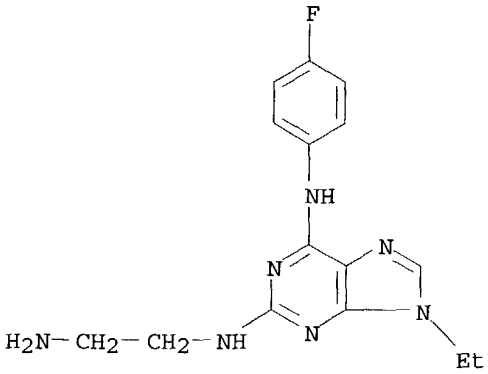
IT **190654-65-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(optimization of substituted purines towards highly potent and selective CDK1 inhibitors)

RN 190654-65-0 HCAPLUS

CN 9H-Purine-2,6-diamine, N2-(2-aminoethyl)-9-ethyl-N6-(4-fluorophenyl)-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

L31 ANSWER 48 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:494641 HCAPLUS
DN 129:227384

ED Entered STN: 10 Aug 1998
TI Exploiting chemical libraries, structure, and genomics in the search for kinase inhibitors
AU Gray, Nathanael S.; Wodicka, Lisa; Thunnissen, Andy-Mark W. H.; Norman, Thea C.; Kwon, Soojin; Espinoza, F. Hernan; Morgan, David O.; Barnes, Georjana; LeClerc, Sophie; Meijer, Laurent; Kim, Sung-Hou; Lockhart, David J.; Schultz, Peter G.
CS Howard Hughes Med. Inst., Univ. California, Berkeley, CA, 94720, USA
SO Science (Washington, D. C.) (1998), 281(5376), 533-538
CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
DT Journal
LA English
CC 7-3 (Enzymes)
Section cross-reference(s): 1, 26, 75
AB Selective protein kinase inhibitors were developed on the basis of the unexpected binding mode of 2,6,9-trisubstituted purines to the ATP-binding site of the human cyclin-dependent kinase 2 (CDK2). By iterating chemical library synthesis and biol. screening, potent inhibitors of the human CDK2-cyclin A kinase complex and of Saccharomyces cerevisiae Cdc28p were identified. The structural basis for the binding affinity and selectivity was determined by anal. of a three-dimensional crystal structure of a CDK2-inhibitor complex. The cellular effects of these compds. were characterized in mammalian cells and yeast. In the latter case the effects were characterized on a genome-wide scale by monitoring changes in mRNA levels in treated cells with high-d. oligonucleotide probe arrays. Purine libraries could provide useful tools for analyzing a variety of signaling and regulatory pathways and may led to the development of new therapeutics.
ST combinatorial library purine protein kinase inhibitor; crystal structure purine inhibitor protein kinase
IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(A, complexes, with gene cdk2 phosphoprotein; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT Phosphoproteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(gene cdk2, complexes, with cyclin A; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT Phosphoproteins
RL: PRP (Properties)
(gene cdk2, complexes, with purvalanol B, crystal structure; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT Crystal structure
(of CDK2-purvalanol B complex; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT Antitumor agents
Combinatorial library
Molecular association
(preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT Structure-activity relationship
(protein kinase-inhibiting; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of

protein kinases)
IT 141349-86-2D, CDK2 protein kinase, complexes with purvalanol B
212844-54-7D, complexes with CDK2 protein kinase
RL: PRP (Properties)
(crystal structure; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT 9026-43-1, Protein kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibitors; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT 101622-51-9P, Olomoucine 146426-40-6P, Flavopiridol 186692-46-6P, Roscovitine 212779-48-1P 212779-49-2P **212844-54-7P**, Purvalanol B
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT 120-73-0DP, Purine, derivs. 212844-53-6P, Purvalanol A
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT 143375-65-9, Cdc28 protein kinase 143375-65-9 146279-88-1D, Cyclin A-cdk2 kinase complex, complexes with cyclin A
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
IT 1651-29-2, 2-Fluoro-6-chloropurine
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
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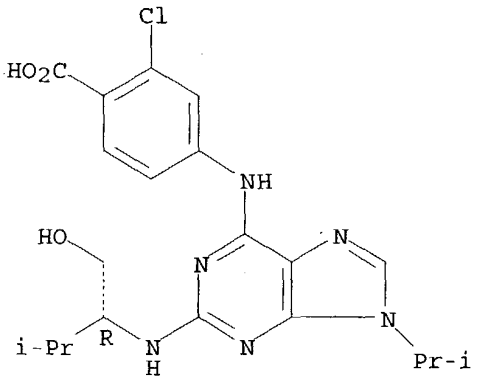
IT **212844-54-7D**, complexes with CDK2 protein kinase
RL: PRP (Properties)
(crystal structure; preparation and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases)

RN 212844-54-7 HCAPLUS

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(prepn. and characterization of a combinatorial library of 2,6,9-trisubstituted purine inhibitors of protein kinases

L31 ANSWER 49 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:405920 HCAPLUS
DN 127:34237
ED Entered STN: 02 Jul 1997
TI Preparation of purine derivatives
IN Zimmermann, Juerg; Capraro, Hans-Georg; Peterli, Patricia; Furet, Pascal
PA Novartis Ag, Switz.; Zimmermann, Juerg; Capraro, Hans-Georg; Peterli, Patricia; Furet, Pascal
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07D473-16
ICS C07D473-00; C07D473-40
CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9716452	A1	19970509	WO 1996-EP4573	19961022
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2234609	AA	19970509	CA 1996-2234609	19961022
	AU 9672968	A1	19970522	AU 1996-72968	19961022
	EP 874846	A1	19981104	EP 1996-934774	19961022
	EP 874846	B1	20030402		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	CN 1202896	A	19981223	CN 1996-198457	19961022
	CN 1066147	B	20010523		
	BR 9611157	A	19990330	BR 1996-11157	19961022
	JP 11514336	T2	19991207	JP 1996-506047	19961022
	AT 236161	E	20030415	AT 1996-934774	19961022
	ES 2196181	T3	20031216	ES 1996-934774	19961022
	ZA 9609168	A	19970501	ZA 1996-9168	19961031
PRAI	CH 1995-3094	A	19951101		
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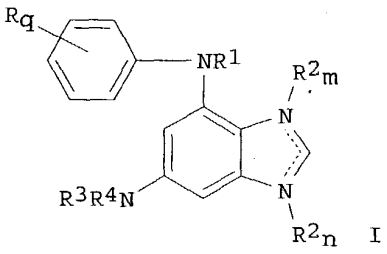
	WO 1996-EP4573	W	19961022		

OS MARPAT 127:34237

GI



I

AB 2-Amino-6-anilino-purine derivs. I (R = halo, alkyl, HO, alkanoyloxy, alkoxy, substituted alkoxy, carboxyl, alkoxycarbonyl, carbamoyl, amino, aminosulfonyl, F3C; R1 = H, carbamoyl, alkylcarbamoyl; R2 = alkyl, Ph, substituted Ph; R3 = H, amino, phenylamino, alkylamino, HO, phenoxy, alkoxy, acyl, carbocyclic radical, or heterocyclic radical; R4 = amino, OH, phenoxy, alkoxy, acyl, substituted hydrocarbon radical, carbocyclic radical, or heterocyclic radical; R3R4 may form a ring; m and n are 0, 1; q = 1-5) were prepared These compds. inhibit p34cdc2/cyclin Bcdc13 kinase and can be used for treatment of hyperproliferative diseases, for example tumor diseases (no data). Thus, 2-chloro-6-(3-chlorophenylamino)-9-ethyl-9H-purine, prepared in two steps from 3-chloroaniline and 2,6-dichloropurine, was treated with ethylenediamine to give 2-(2-aminoethylamino)-6-(3-chlorophenylamino)-9-ethyl-9H-purine.

ST purine deriv prepn hyperproliferative disease treatment; antitumor purine deriv

IT Antitumor agents
(preparation of antitumor purine derivs.)

IT 143375-65-9
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of antitumor purine derivs.)

IT 51-85-4, Cystamine 61-54-1, Tryptamine 64-04-0, Phenethylamine 78-90-0, 1,2-Diaminopropane 95-54-5, 1,2-Phenylenediamine, reactions 98-16-8, 3-(Trifluoromethyl)aniline 100-01-6, reactions 100-46-9, Benzylamine, reactions 107-15-3, 1,2-Ethanediamine, reactions 108-42-9, 3-Chloroaniline 108-45-2, 1,3-Benzenediamine, reactions 108-49-6, 2,6-Dimethylpiperazine 108-91-8, Cyclohexylamine, reactions 109-76-2, 1,3-Propanediamine 109-81-9, N-Methylethylenediamine 110-85-0, Piperazine, reactions 111-40-0 111-42-2, Diethanolamine, reactions 124-68-5 140-31-8, 1-Piperazineethanamine 156-87-6, 3-Amino-1-propanol 177-11-7, 1,4-Dioxa-8-azaspiro[4.5]decane 288-32-4, Imidazole, reactions 371-40-4, 4-Fluoroaniline 372-19-0, 3-Fluoroaniline 505-19-1, Hexahydropyridazine 534-03-2, 2-Amino-1,3-propanediol 536-90-3, m-Anisidine 617-89-0, 2-Furfurylamine 622-58-2, p-Tolyl isocyanate 624-83-9, Methyl isocyanate 768-94-5, 1-Aminoadamantane 811-93-8, 1,2-Diamino-2-methylpropane 1001-53-2, N-Acetylethylenediamine 1119-28-4, 3-Aminopropionitrile fumarate 1121-22-8, trans-1,2-Diaminocyclohexane 1436-59-5, cis-1,2-Diaminocyclohexane 1477-55-0, 1,3-Bis(aminomethyl)benzene 1609-86-5, tert-Butyl isocyanate 1668-10-6, Glycinamide hydrochloride 2038-03-1, 4-(2-Aminoethyl)morpholine 2237-30-1, 3-Aminobenzonitrile 2615-25-0, trans-1,4-Diaminocyclohexane 2706-56-1, 2-(2-Aminoethyl)pyridine 2799-16-8 2799-17-9, S-(+)-1-Amino-2-propanol 2842-38-8, 2-(Cyclohexylamino)ethanol 3173-53-3, Cyclohexyl isocyanate 4000-72-0, 1-(Aminomethyl)-1-cyclohexanol 4403-69-4, 2-Aminobenzylamine 4795-29-3, Tetrahydrofurfurylamine 5332-73-0, 3-Methoxypropylamine 5382-16-1, 4-Hydroxypiperidine 5451-40-1, 2,6-Dichloropurine 5456-63-3, trans-2-Aminocyclohexanol hydrochloride 5856-62-2, S-(+)-2-Amino-1-butanol 5856-63-3 6321-23-9, 4-Methylcyclohexylamine 6936-47-6, cis-2-Aminocyclohexanol hydrochloride 7324-05-2 7531-52-4, L-Prolinamide 10316-79-7 15827-56-2, cis-1,4-Diaminocyclohexane 15932-66-8, 2-(2-Aminoethyl)piperidine 20439-47-8, (1R,2R)-(-)-1,2-Diaminocyclohexane 21436-03-3 23356-96-9, L-Prolinol 26772-34-9, cis-1,3-Diaminocyclohexane 26883-70-5, trans-1,3-Diaminocyclohexane 27578-60-5, 1-Piperidineethanamine 30651-60-6, 1-Aminopiperazine 32673-41-9, 4-(Hydroxymethyl)imidazole hydrochloride 50910-54-8, trans-4-Aminocyclohexanol hydrochloride 57414-85-4, Ethyl 3-amino-2-methylbenzoate 62937-45-5 68832-13-3, D-Prolinol 103831-11-4, 3-Aminopyrrolidine dihydrochloride 190655-14-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of antitumor purine derivs.)

IT 106-47-8P, 4-Chloroaniline, preparation 24313-88-0P, 3,4,5-Trimethoxyaniline 39639-50-4P 82720-42-1P 190654-76-3P 190654-77-4P 190654-78-5P 190654-80-9P 190654-83-2P 190654-85-4P 190654-87-6P 190654-88-7P 190654-89-8P 190654-90-1P 190654-91-2P 190654-92-3P 190654-93-4P 190654-94-5P 190654-95-6P 190654-96-7P 190654-97-8P 190654-98-9P **190654-99-0P 190655-00-6P** 190655-01-7P **190655-02-8P** 190655-03-9P 190655-04-0P 190655-05-1P 190655-06-2P 190655-07-3P 190655-08-4P **190655-09-5P 190655-10-8P** 190655-11-9P **190655-15-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of antitumor purine derivs.)

IT 190654-11-6P 190654-14-9P 190654-30-9P 190654-40-1P 190654-72-9P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use);

BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of antitumor purine derivs.)

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190654-00-3P 190654-01-4P 190654-02-5P 190654-03-6P 190654-04-7P
190654-05-8P 190654-06-9P 190654-07-0P 190654-08-1P 190654-09-2P
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190654-61-6P 190654-62-7P 190654-63-8P **190654-64-9P**
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190654-69-4P 190654-70-7P 190654-71-8P 190654-73-0P 190654-74-1P
190654-75-2P 190655-12-0P 190655-13-1P 190655-30-2P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antitumor purine derivs.)

IT 190654-50-3P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antitumor purine derivs.)

IT **190654-99-0P 190655-00-6P 190655-02-8P**
190655-09-5P 190655-10-8P 190655-15-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of antitumor purine derivs.)

RN 190654-99-0 HCAPLUS
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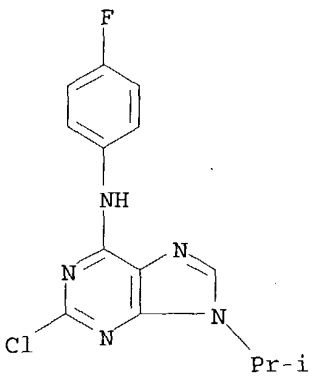
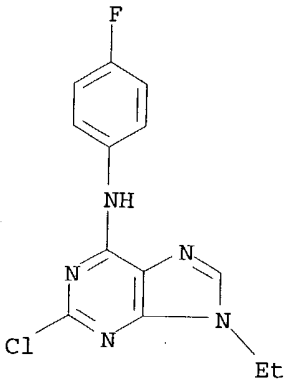
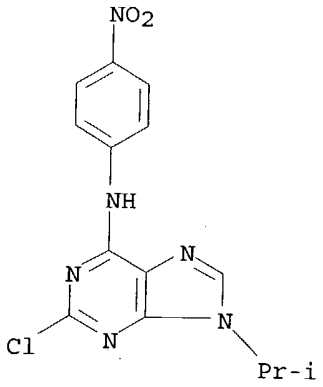


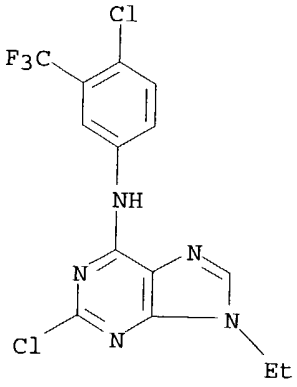
RN 190655-00-6 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-9-ethyl-N-(4-fluorophenyl)- (9CI) (CA INDEX NAME)



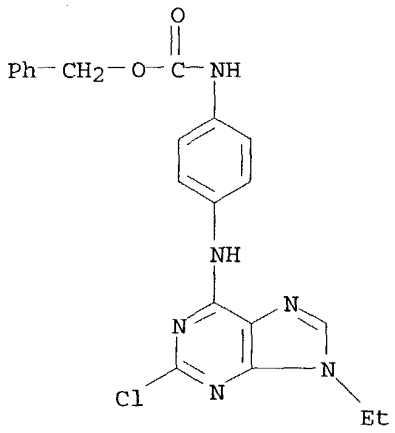
RN 190655-02-8 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-9-(1-methylethyl)-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)



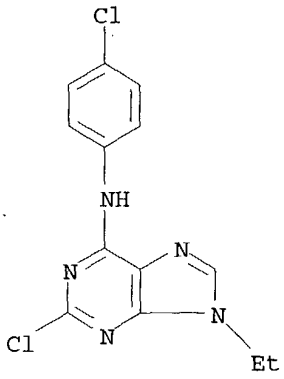
RN 190655-09-5 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-N-[4-chloro-3-(trifluoromethyl)phenyl]-9-ethyl- (9CI) (CA INDEX NAME)



RN 190655-10-8 HCAPLUS
CN Carbamic acid, [4-[(2-chloro-9-ethyl-9H-purin-6-yl)amino]phenyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)



RN 190655-15-3 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-N-(4-chlorophenyl)-9-ethyl- (9CI) (CA INDEX NAME)



IT **190654-64-9P 190654-65-0P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of antitumor purine derivs.)
RN 190654-64-9 HCAPLUS
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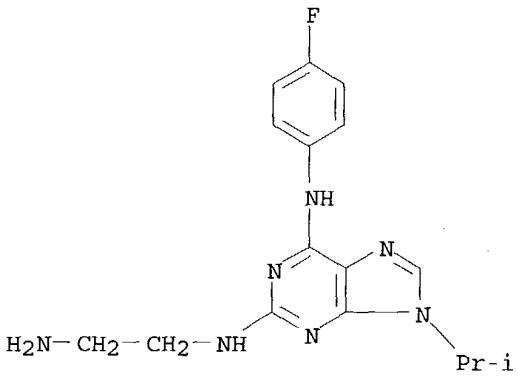

● HCl

RN 190654-65-0 HCAPLUS
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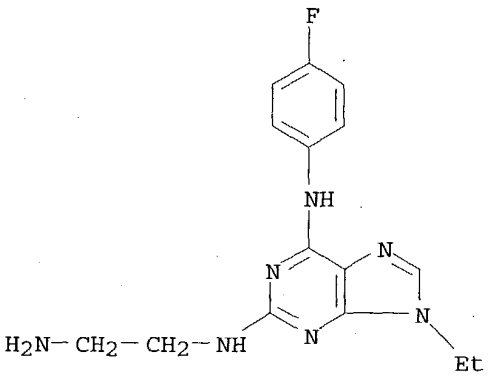
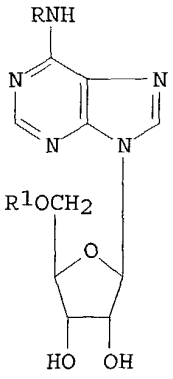


● HCl

L31 ANSWER 50 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:153455 HCAPLUS
DN 120:153455
ED Entered STN: 02 Apr 1994
TI Adenosine receptor prodrugs: Synthesis and biological activity of derivatives of potent, A1-selective agonists
AU Maillard, Michel C.; Nikodijevic, Olga; LaNoue, Kathryn F.; Berkich, Deborah; Ji, Xiao Duo; Bartus, Raymond; Jacobson, Kenneth A.
CS Lab. Bioorg. Chem., Natl. Inst. Diabetes, and Dig. Kidney Dis., Bethesda, MD, USA
SO Journal of Pharmaceutical Sciences (1994), 83(1), 46-53
CODEN: JPMSAE; ISSN: 0022-3549
DT Journal

LA English
CC 1-10 (Pharmacology)
Section cross-reference(s): 33, 63
GI



I, R=H, R^1=C_6H_4-p-$CH_2CONHC_6H_4$-p-$CH_2CONHCH_2CH_2NHAc$
II, R=H, R^1=cyclopentyl
III, R=methyl dibydiopyridinylcarbonyl
R^1=C_6H_4-p-$CH_2CONHC_6H_4$-p-$CH_2CONHCH_2CH_2NHAc$

AB 5'-Ester derivs. of the potent adenosine agonists I and N6-cyclopentyladenosine II were prepared as prodrugs. Both alkyl esters or carbonates (designed to enter the brain by virtue of increased lipophilicity) and 1,4-dihydro-1-methyl-3-[(pyridinylcarbonyl)oxy]esters designed to concentrate in the brain by virtue of a redox delivery system were synthesized. In the 5'-blocked form, the adenosine agonists displayed highly diminished affinity for rat brain A1-adenosine receptors in binding assays. The dihydropyridine prodrug III was active in an assay of locomotor depression in mice, in which adenosine agonists are highly depressant. The behavior depression was not reversible by peripheral administration of a non-central nervous system active adenosine antagonist. In an assay of the peripheral action of adenosine (i.e., the inhibition of lipolysis in rats), the parent compds. were highly potent and the dihydropyridine prodrug was much less potent.

ST adenosine receptor ester prodrug prepn
IT Nervous system depressants
(adenosine derivative prodrug agonists, preparation of and drug delivery to brain)
IT Brain, composition
(adenosine receptors of, ester prodrugs binding of, CNS depressant activity in relation to)
IT Pharmaceutical dosage forms
(prodrugs, adenosine ester derivs., preparation and CNS depressant activity of)
IT Receptors
RL: PROC (Process)
(purinergic A1, adenosine derivative prodrugs binding of)
IT 96760-69-9, ADAC
RL: BIOL (Biological study)
(CNS depressant and adenosine receptor binding activities of, drug delivery to brain in relation to)
IT 638-08-4, Stearic anhydride 16837-38-0, Nicotinic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of adenosine derivs.)
IT 41552-82-3DP, esters 96760-70-2DP, esters
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and CNS depressant and adenosine receptor binding activities

of, brain delivery in relation to)

IT **151563-14-3P 151563-16-5P** 151563-20-1P 151563-21-2P
151563-22-3P 151563-23-4P 151563-26-7P 151563-27-8P 151563-28-9P
151563-30-3P 151563-31-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and CNS depressant and adenosine receptor binding activities
of, drug delivery to brain in relation to)

IT 151563-15-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and acylation of)

IT **151563-13-2P 151563-17-6P** 151563-24-5P 151563-25-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and deprotection of)

IT 151563-29-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reduction of)

IT **151563-18-7P** 151563-19-8P 153448-42-1P 153448-43-2P
153448-44-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 58-61-7, Adenosine, biological studies
RL: BIOL (Biological study)
(receptor agonists, ester prodrug derivs. binding of)

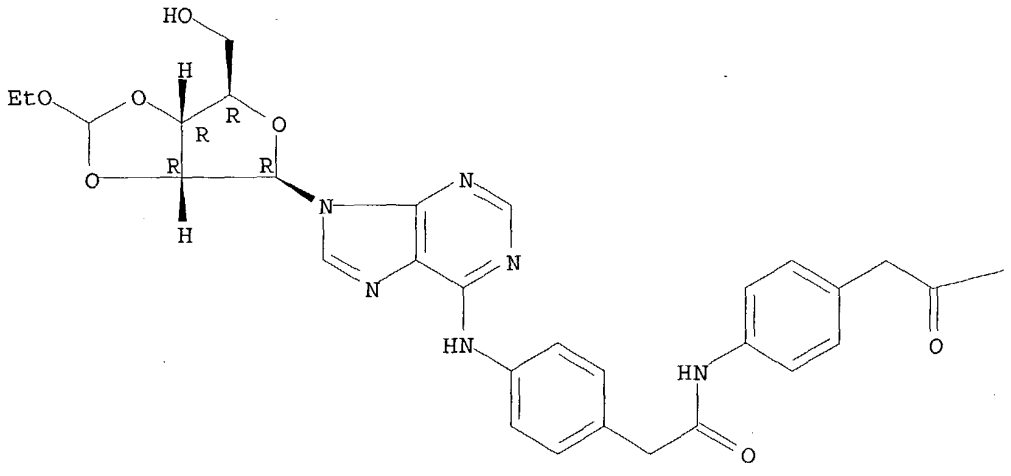
IT **151563-14-3P 151563-16-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and CNS depressant and adenosine receptor binding activities
of, drug delivery to brain in relation to)

RN 151563-14-3 HCAPLUS

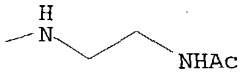
CN Adenosine, N-[4-[2-[[4-[2-[[2-(acetylamino)ethyl]amino]-2-
oxoethyl]phenyl]amino]-2-oxoethyl]phenyl]-2',3'-O-(ethoxymethylene)- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



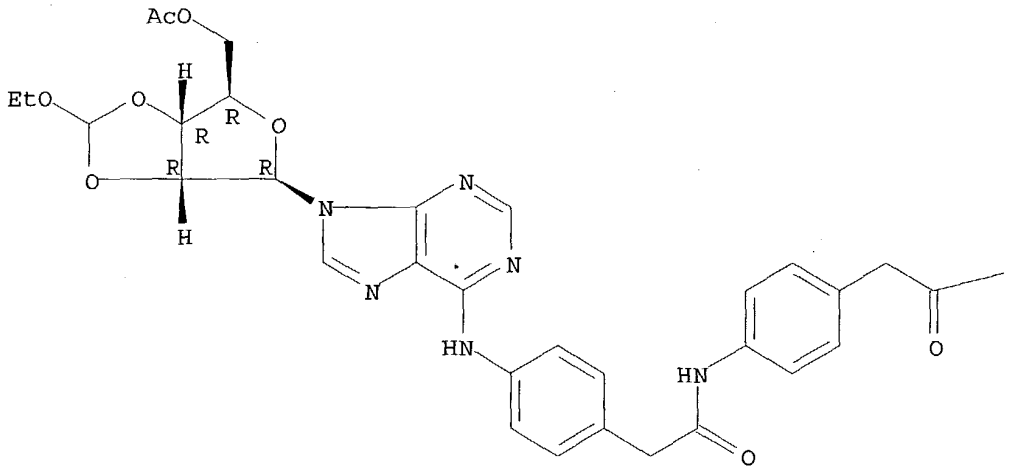
PAGE 1-B



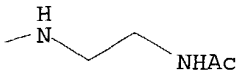
RN 151563-16-5 HCAPLUS
CN Adenosine, N-[4-[2-[[4-[2-[[2-(acetylamino)ethyl]amino]-2-oxoethyl]phenyl]amino]-2-oxoethyl]phenyl]-2',3'-O-(ethoxymethylene)-, 5'-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



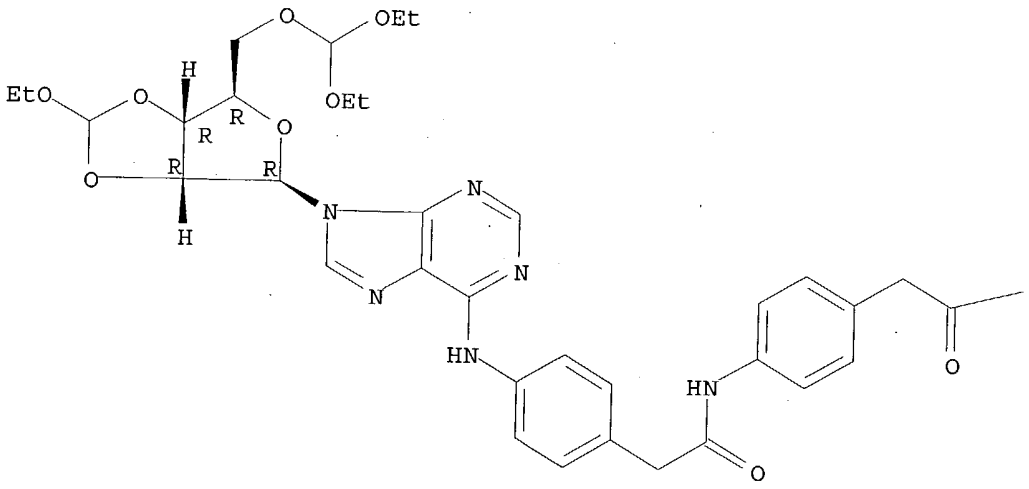
IT **151563-13-2P 151563-17-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and deprotection of)

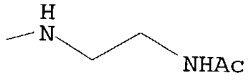
RN 151563-13-2 HCAPLUS
CN Adenosine, N-[4-[2-[[4-[2-[[2-(acetylamino)ethyl]amino]-2-oxoethyl]phenyl]amino]-2-oxoethyl]phenyl]-5'-O-(diethoxymethyl)-2',3'-O-(ethoxymethylene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



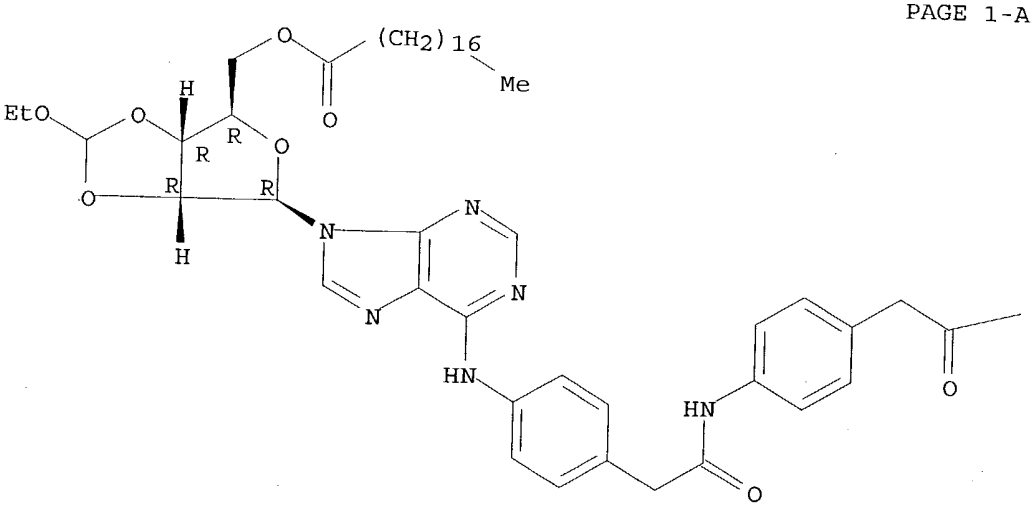
PAGE 1-B



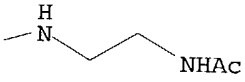
RN 151563-17-6 HCAPLUS
CN Adenosine, N-[4-[2-[[4-[2-[[2-(acetylamino)ethyl]amino]-2-oxoethyl]phenyl]amino]-2-oxoethyl]phenyl]-2',3'-O-(ethoxymethylene)-, 5'-octadecanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



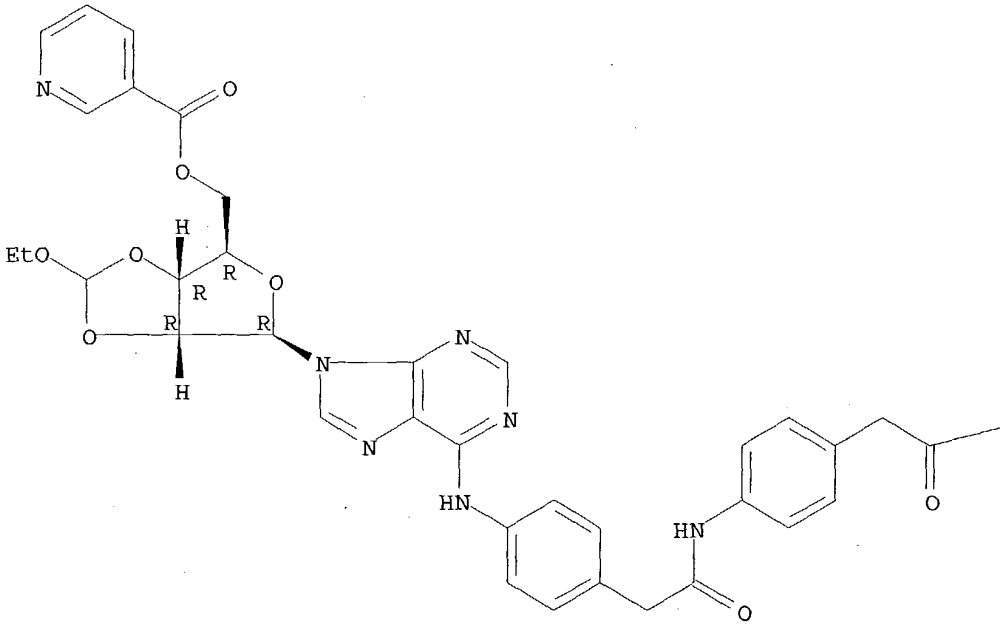
PAGE 1-B



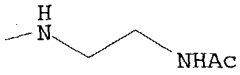
IT **151563-18-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 151563-18-7 HCAPLUS
CN Adenosine, N-[4-[2-[[4-[2-[[2-(acetylamino)ethyl]amino]-2-oxoethyl]phenyl]amino]-2-oxoethyl]phenyl]-2',3'-O-(ethoxymethylene)-, 5'-(3-pyridinecarboxylate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

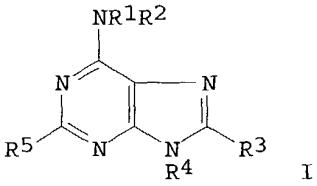


L31 ANSWER 51 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:95745 HCAPLUS
DN 120:95745
ED Entered STN: 05 Mar 1994
TI Method of determining viability of tissue with adenosine/adenosine agonist and A1 adenosine receptor antagonist
IN Mcafee, Donald A.; Belardinelli, Luiz
PA Whitby Research Inc., USA
SO U.S., 8 pp.

CODEN: USXXAM
DT Patent
LA English
IC A61B006-00
NCL 128654000
CC 1-1 (Pharmacology)
Section cross-reference(s): 28
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5117830	A	19920602	US 1990-610544	19901108
	US 5256398	A	19931026	US 1992-828115	19920130
PRAI	US 1990-610544		19901108		

GI



I

AB A method and composition is disclosed for determining the viability of tissue in a region of an organism having a vascular circulatory system that supplies blood to the region; the method includes: (1) dilating the above vascular circulation system by introducing adenosine or an adenosine agonist into the vascular circulation system to increase the blood flow into the region; (2) introducing a blood flow marking medium into the region; (3) alleviating the non-dilating effects of adenosine or the adenosine agonist by introducing an A1 adenosine receptor antagonist into the vascular circulatory system; and (4) determining the amount of marking medium in the region. The compns. of the invention include I [R1 = H, R2; R2 = endo-2-norbornyl, cyclopentyl; R3 = H, halo, amine, carboxy, C1-10 alkyl, etc.; R4 = benzyl, Ph, (O-substituted) C1-4 alkyl (e.g. ethers, alcs.); R5 = H, OH, sulfonate, halo, C1-6 (cyclo)alkoxy]. The method and composition of the invention are useful in thallium-201 scintigraphy, and decrease side effects through alleviating the A1 effects of adenosine as an A1 antagonist while maintaining the A2 vasodilation activity of adenosine. Preparation of selected I is included, and various I were assayed in A1 and A2 test systems.

ST tissue viability adenosine agonist antagonist; A1 adenosine antagonist tissue viability; thallium scintigraphy adenosine agonist antagonist; adenine deriv prepn tissue viability

IT Circulation
(adenosine/adenosine agonist and A1 adenosine antagonist in tissue viability determination in relation to blood flow in)

IT Heart
(adenosine/adenosine agonist and adenosine A1 receptor antagonist for scintigraphy of)

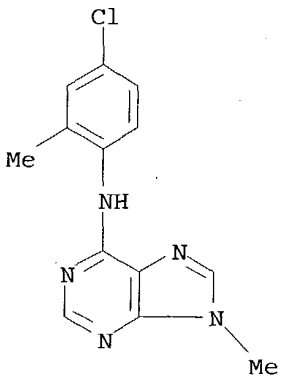
IT Scintigraphy
(adenosine/adenosine agonist and adenosine A1 receptor antagonist for, of heart)

IT Molecular structure-biological activity relationship
(of adenine derivs. for adenosine A1 and A2 receptors)

IT Animal tissue

(viability of, determination of, adenosine/adenosine agonist and A1 adenosine
antagonist in)
IT Neurotransmitter agonists
(purinergic, adenosine A1 receptor antagonist and, for tissue viability determination)
IT Neurotransmitter antagonists
(purinergic A1, adenosine/adenosine agonist and, for tissue viability determination)
IT 109292-96-8 109292-97-9
RL: ANST (Analytical study)
(adenosine A1 and A2 receptor activity and adenosine antagonist activity of, tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)
IT 700-00-5 2009-52-1 5440-16-4 84602-82-4 109292-90-2 109292-93-5
109292-95-7 109292-99-1 109293-00-7 135394-01-3 135394-04-6
73-24-5, Adenine, biological studies
RL: ANST (Analytical study)
(adenosine A1 and A2 receptor activity of, tissue viability determination with
adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)
IT 109293-01-8 135394-02-4 152570-79-1 152570-84-8 152570-85-9
152570-86-0 152570-87-1 152570-88-2 152570-89-3 **152570-90-6**
152570-91-7 152570-92-8 152570-93-9 152570-94-0 152570-95-1
RL: ANST (Analytical study)
(adenosine antagonist activity of, tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)
IT 73-24-5D, Adenine, derivs. 109292-91-3 109292-94-6 131713-76-3
131713-78-5 131713-81-0 131713-82-1 141696-90-4 152570-77-9
152570-78-0 152570-80-4 152570-81-5 152570-82-6
RL: ANST (Analytical study)
(for tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist)
IT 58-61-7, Adenosine, biological studies
RL: BIOL (Biological study)
(or adenosine agonist, adenosine A1 receptor antagonist and, for tissue viability determination)
IT 81777-47-1P 131713-75-2P 131713-80-9P 131713-84-3P 131713-85-4P
131713-86-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in adenine derivative preparation for tissue viability
determination)
IT 131713-77-4P 131713-79-6P 152570-83-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for adenine derivative preparation for tissue viability determination)
IT 131713-83-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for tissue viability determination with adenosine/adenosine agonist
and adenosine A1 receptor antagonist)
IT 87-42-3, 6-Chloropurine 1003-03-8, Cyclopentylamine 2346-74-9
4524-93-0, Cyclopentane carbonyl chloride 5451-40-1, 2,6-Dichloropurine
52602-68-3, 4-Methylamino-5-amino-6-chloropyrimidine 65481-69-8,
endo-2-Aminonorbornane hydrochloride 81777-40-4, (2-Acetoxyethoxy)methyl bromide

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in adenine derivative preparation for tissue viability determination)
IT 131713-74-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in adenine derivative preparation for tissue viability determination with
adenosine/adenosine agonist and adenosine A1 receptor antagonist)
IT 14391-63-0, Rubidium-82, biological studies 15064-65-0, Thallium-201, biological studies
RL: BIOL (Biological study)
(tissue viability determination with adenosine/adenosine agonist and adenosine
A1 receptor antagonist and)
IT **152570-90-6**
RL: ANST (Analytical study)
(adenosine antagonist activity of, tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)
RN 152570-90-6 HCAPLUS
CN 9H-Purin-6-amine, N-(4-chloro-2-methylphenyl)-9-methyl- (9CI) (CA INDEX NAME)



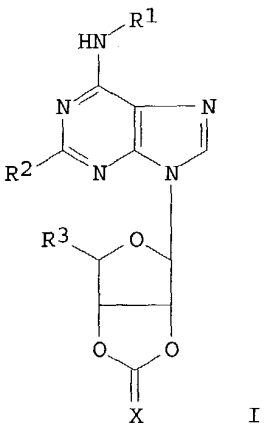
L31 ANSWER 52 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:236101 HCAPLUS
DN 116:236101
ED Entered STN: 13 Jun 1992
TI Preparation of new adenosine derivatives as cardiovascular agents.
IN Gadient, Fulvio
PA Sandoz-Patent-G.m.b.H., Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07H019-167
ICS A61K031-70
CC 33-9 (Carbohydrates)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4025879	A1	19920220	DE 1990-4025879	19900816

	CA 2064869	AA	19920217	CA 1991-2064869	19910813
	WO 9203463	A1	19920305	WO 1991-CH170	19910813
	W: AU, CA, CS, FI, HU, JP, KR, PL, SU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	AU 9183032	A1	19920317	AU 1991-83032	19910813
	AU 638600	B2	19930701		
	EP 496852	A1	19920805	EP 1991-913964	19910813
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	HU 60504	A2	19920928	HU 1992-1080	19910813
	JP 05502889	T2	19930520	JP 1991-513113	19910813
	ZA 9109267	A	19930524	ZA 1991-9267	19911212
	RO 110236	B1	19951130	RO 1992-152	19920213
PRAI	DE 1990-4025879	A	19900816		
	WO 1991-CH170	A	19910813		

OS MARPAT 116:236101

GI



I

AB The title compds. [I; R1 = H, alkyl, cycloalkyl, Ph, (substituted) phenylalkyl; R2 = H, alkyl, halo, cycloalkyl; R3 = CH2OH, CONHR4; R4 = H, alkyl, cycloalkyl; X = O, S], useful for the treatment of hypertension, thrombolism, supraventricular tachycardia, etc. (no data), were prepared Cyclocondensation of 1'-deoxy-1'-(6-p-methoxyanilino-2-methyl-9-purinyl)-β-D-ribofuranuronic acid N-ethylamide with 1,1'-carbonyldi-1H-imidazole in DMF at room temperature for 5 h gave I [R1 = p-MeOC6H4, R2 = Me, R3 = EtNHCO, X = O].

ST adenosine deriv prepn cardiovascular agent; antihypertensive adenosine deriv; Coronary vasodilator adenosine deriv; antithrombotic adenosine deriv; endothelium blood vessel protectant; antihyperlipidemic adenosine deriv; bradycardic adenosine deriv; supraventricular tachycardia treatment adenosine deriv

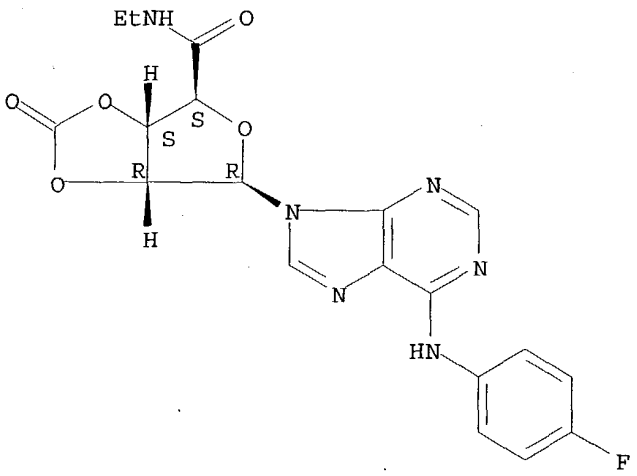
IT Anticholesteremics and Hypolipemics
Anticoagulants and Antithrombotics
Antihypertensives
(adenosine derivs.)

IT Antiarrhythmics
(bradycardiacs, supraventricular, adenosine derivs.)

IT Vasodilators

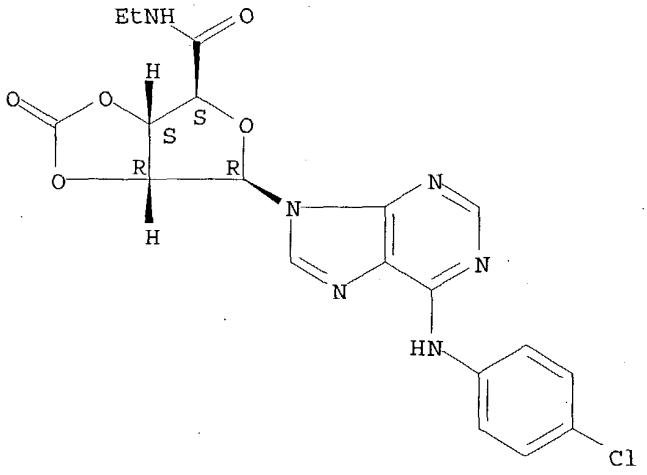
(coronary, adenosine derivs.)
IT Blood vessel, composition
(endothelium, protection of, adenosine derivs. for)
IT Heart, disease
(supraventricular tachycardia, treatment of, adenosine derivs. for)
IT 141426-21-3P 141426-22-4P 141426-23-5P 141426-24-6P 141426-25-7P
141426-26-8P 141426-27-9P **141426-28-0P 141426-29-1P**
141426-30-4P 141426-31-5P 141426-32-6P 141426-33-7P 141426-34-8P
141426-35-9P 141426-36-0P 141426-37-1P 141426-38-2P 141426-39-3P
141426-40-6P **141426-41-7P** 141426-42-8P 141426-43-9P
141448-37-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as cardiovascular agent)
IT 50-99-7P, D-Glucose, preparation
RL: PREP (Preparation)
(tolerance of, enhancement of, adenosine derivs. for)
IT **141426-28-0P 141426-29-1P 141426-41-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of, as cardiovascular agent)
RN 141426-28-0 HCAPLUS
CN β-D-Ribofuranuronamide, 1-deoxy-N-ethyl-1-[6-[(4-fluorophenyl)amino]-9H-purin-9-yl]-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



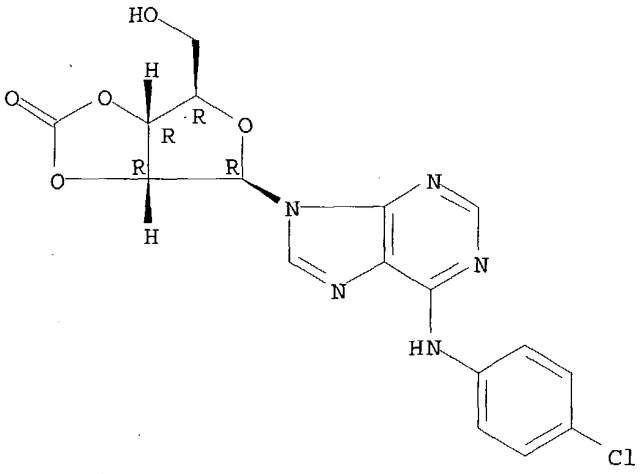
RN 141426-29-1 HCAPLUS
CN β-D-Ribofuranuronamide, 1-[6-[(4-chlorophenyl)amino]-9H-purin-9-yl]-1-deoxy-N-ethyl-, cyclic 2,3-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 141426-41-7 HCAPLUS
CN Adenosine, N-(4-chlorophenyl)-, cyclic 2',3'-carbonate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 53 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:529731 HCAPLUS
DN 115:129731
ED Entered STN: 05 Oct 1991
TI Mutagenicity of (p-nitrophenyl)adenines in Salmonella typhimurium
AU Matsuda, Akira; Akashi, Makiko; Ohara, Yoshiko; Wataya, Yusuke; Hayatsu, Hikoya; Ueda, Tohru
CS Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan
SO Mutation Research (1991), 263(2), 93-100
CODEN: MUREAV; ISSN: 0027-5107
DT Journal
LA English
CC 4-6 (Toxicology)
Section cross-reference(s): 1, 28

AB Adenine derivs. having a p-nitrophenyl group at position 2, 8, or 9 were directly mutagenic towards S. typhimurium strains TA98 and TA100, whereas N6-(p-nitrophenyl)adenine was not mutagenic. 2,9- And 8,9-bis-(p-nitrophenyl)adenines were also mutagenic, but N6, 9-bis-(p-nitrophenyl)adenine was not. The study on 13 (p-nitrophenyl)adenine derivs. for their Salmonella mutagenicity indicates that only those having a p-nitrophenyl ring directly linked to the purine ring are mutagenic, implying the importance of the coplanar character of the nitrophenyl and the purine rings. The nitro group seems essential for the mutagenicity, as shown from the results of assays using nitroarene-sensitive and -insensitive Salmonella strains. The mutagenic potency of this class of compds. is high, comparable to that of 2-nitrofluorene.

ST nitrophenyladenine mutagenicity

IT Mutagens
(nitrophenyladenines)

IT Molecular structure-biological activity relationship
(mutagenic, of nitrophenyladenines)

IT 350-46-9, p-Fluoronitrobenzene
RL: BIOL (Biological study)
(for preparing nitrophenyladenines)

IT 37151-16-9 109875-45-8 109875-50-5
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(mutagenicity of)

IT 136112-74-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis and nitration of)

IT 73-24-5DP, 1H-Purin-6-amine, nitrophenyl derivs. 5134-49-6P 21313-86-0P 21314-05-6P 40297-54-9P 73215-03-9P 136112-69-1P 136112-70-4P 136112-71-5P **136112-72-6P** 136112-73-7P
RL: ADV (Adverse effect, including toxicity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and mutagenicity of)

IT 100-11-8, p-Nitrobenzyl bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with adenine or adenosine)

IT 5399-87-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with aniline)

IT 62-53-3, Aniline, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloropurine riboside)

IT 73-24-5, 1H-Purin-6-amine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with fluoronitrobenzenes)

IT 118-70-7, 4,5,6-Triaminopyrimidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzonitrile)

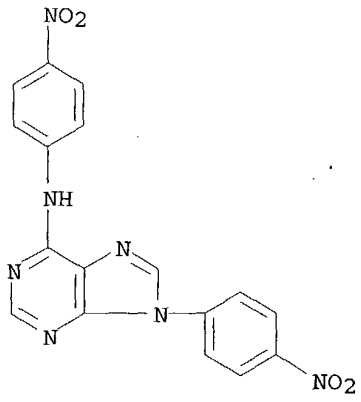
IT 58-61-7, Adenosine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrobenzyl bromide)

IT 619-72-7, p-Nitrobenzonitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triaminopyrimidine)

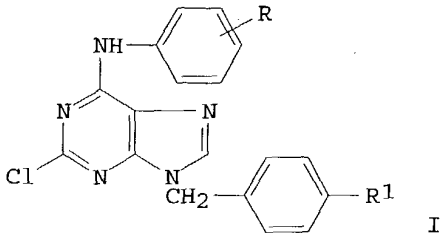
IT **136112-72-6P**
RL: ADV (Adverse effect, including toxicity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and mutagenicity of)

RN 136112-72-6 HCAPLUS

CN 9H-Purin-6-amine, N,9-bis(4-nitrophenyl)- (9CI) (CA INDEX NAME)



L31 ANSWER 54 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:197954 HCAPLUS
DN 112:197954
ED Entered STN: 26 May 1990
TI Antirhinovirus activity of 6-anilino-9-benzyl-2-chloro-9H-purines
AU Kelley, James L.; Linn, James A.; Selway, J. W. T.
CS Div. Org. Chem., Burroughs Wellcome Co., Research Triangle Park, NC, 27709, USA
SO Journal of Medicinal Chemistry (1990), 33(5), 1360-3
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 26-9 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 1
OS CASREACT 112:197954
GI



I

AB 6-Anilino-9-benzyl-2-chloropurines I [R = H, alkyl, alkoxy, alkylthio, (un)substituted amino, cyano, Br, CF3, F, CO2Et, SO2Me, NO2; R1 = H; R = H, R1 = Me] were prepared and tested for antirhinovirus activity. Most of the compds. were prepared by reaction of the aniline with 9-benzyl-2,6-dichloro-9H-purine. Structure-activity relationship studies revealed that compds. with small, lipophilic para substituents were good inhibitors of serotype 1B. Several compds. had good activity against four representative serotypes.

ST anilinobenzylchloropurine prepn virucide; purine anilinobenzylchloro prepn virucide

IT Virucides and Virustats
(anilinobenzylchloropurines)

IT Molecular structure-biological activity relationship
(virucidal, of anilinobenzylchloropurines)

IT 554-84-7, 3-Nitrophenol
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of)

IT 79064-26-9 115204-73-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of)

IT 35216-39-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with benzyldichloropurine)

IT 122329-01-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)

IT 125802-42-8P 125802-43-9P **125802-44-0P 125802-45-1P**
125802-46-2P 125802-47-3P 125802-48-4P **125802-49-5P**
125802-50-8P 125802-51-9P 125802-52-0P
125802-53-1P 125802-54-2P 125802-55-3P
125802-56-4P 125802-57-5P 125802-58-6P 125802-59-7P 125802-60-0P
125802-61-1P 125802-62-2P 125802-63-3P 125802-64-4P 125802-65-5P
125827-87-4P 125827-88-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and virucidal activity of)

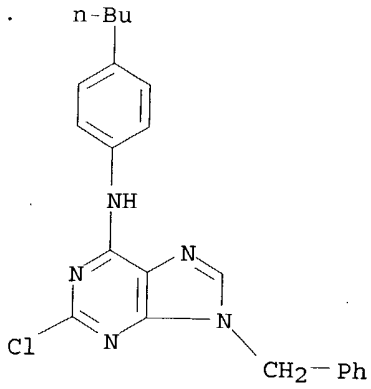
IT 62-53-3, Aniline, reactions 94-09-7, Ethyl 4-aminobenzoate 99-09-2, 3-Nitroaniline 99-98-9, 4-Dimethylaminoaniline 102-28-3, 3-Acetylaminoaniline 104-13-2, 4-Butylaniline 106-40-1, 4-Bromoaniline 106-49-0, reactions 106-50-3, 1,4-Benzenediamine, reactions 108-45-2, 1,3-Benzenediamine, reactions 122-80-5, 4-Acetylaminoaniline 371-40-4, 4-Fluoroaniline 372-19-0, 3-Fluoroaniline 582-33-2, Ethyl 3-aminobenzoate 591-19-5, 3-Bromoaniline 2570-98-1 2836-04-6, 3-Dimethylaminoaniline 4344-55-2, 4-Butoxyaniline 7664-66-6, 4-Isopropoxyaniline 23079-68-7, 3-Butoxyaniline 39870-00-3, 4-Methylthioaniline hydrochloride 41406-00-2, 3-Isopropoxyaniline 90774-69-9, 4-Trifluoromethylaniline hydrochloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzyldichloropurine)

IT 2976-32-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of)

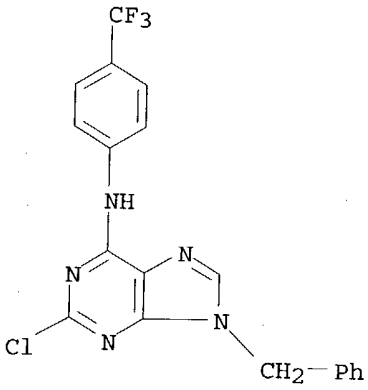
IT **125802-44-0P 125802-45-1P 125802-46-2P**
125802-49-5P 125802-50-8P 125802-51-9P
125802-52-0P 125802-53-1P 125802-54-2P
125802-55-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and virucidal activity of)

RN 125802-44-0 HCAPLUS

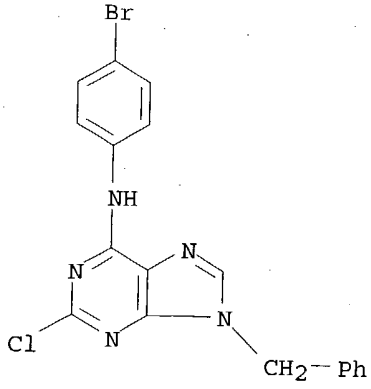
CN 9H-Purin-6-amine, N-(4-butylphenyl)-2-chloro-9-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 125802-45-1 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-9-(phenylmethyl)-N-[4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

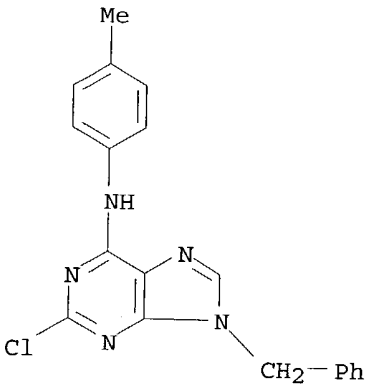


RN 125802-46-2 HCAPLUS
CN 9H-Purin-6-amine, N-(4-bromophenyl)-2-chloro-9-(phenylmethyl)- (9CI) (CA INDEX NAME)

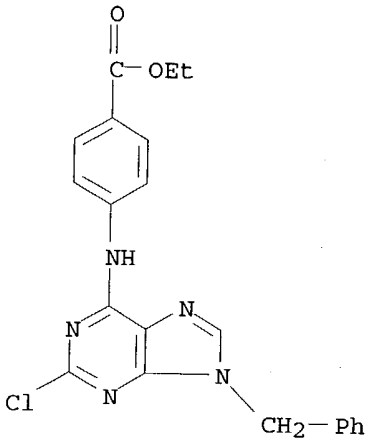


RN 125802-49-5 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-N-(4-methylphenyl)-9-(phenylmethyl)- (9CI) (CA

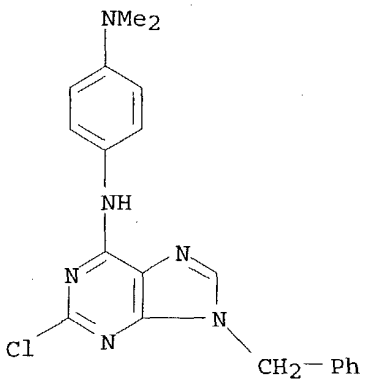
INDEX NAME)



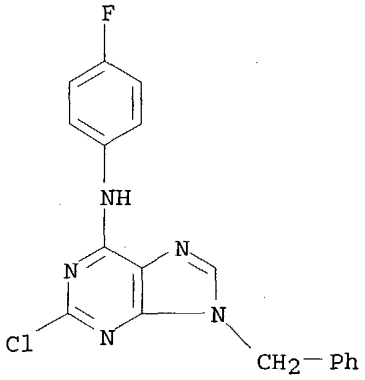
RN 125802-50-8 HCAPLUS
CN Benzoic acid, 4-[[2-chloro-9-(phenylmethyl)-9H-purin-6-yl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 125802-51-9 HCAPLUS
CN 1,4-Benzenediamine, N'-[2-chloro-9-(phenylmethyl)-9H-purin-6-yl]-N,N-dimethyl- (9CI) (CA INDEX NAME)

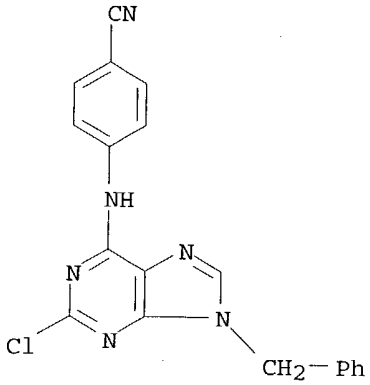


RN 125802-52-0 HCAPLUS
CN 9H-Purin-6-amine, 2-chloro-N-(4-fluorophenyl)-9-(phenylmethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

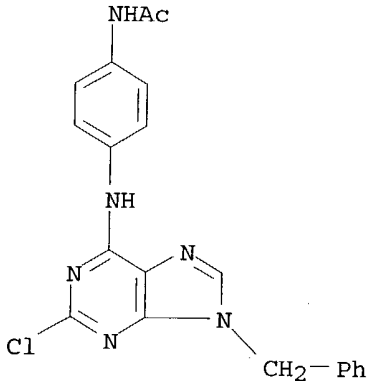


● HCl

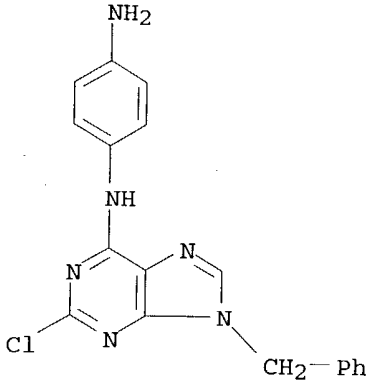
RN 125802-53-1 HCAPLUS
CN Benzonitrile, 4-[[2-chloro-9-(phenylmethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)



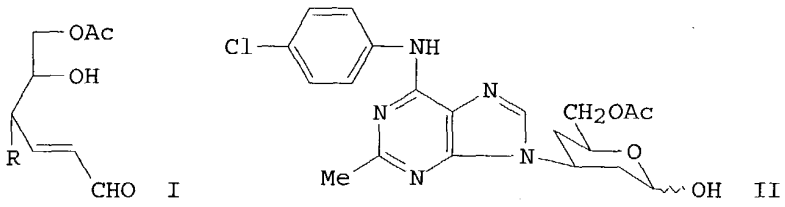
RN 125802-54-2 HCAPLUS
CN Acetamide, N-[4-[[2-chloro-9-(phenylmethyl)-9H-purin-6-yl]amino]phenyl]- (9CI) (CA INDEX NAME)



RN 125802-55-3 HCAPLUS
CN 1,4-Benzenediamine, N-[2-chloro-9-(phenylmethyl)-9H-purin-6-yl]- (9CI) (CA INDEX NAME)



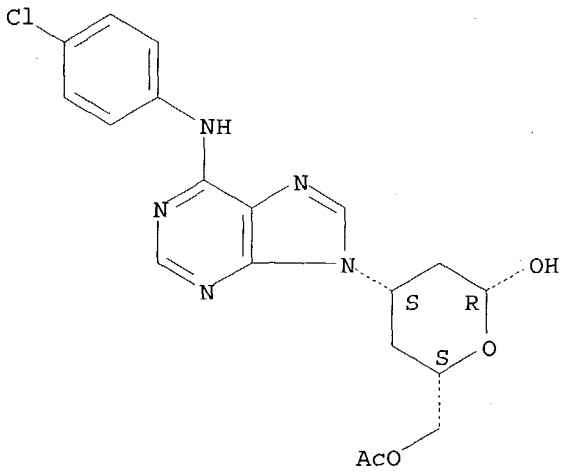
L31 ANSWER 55 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1989:24222 HCAPLUS
DN 110:24222
ED Entered STN: 21 Jan 1989
TI Synthesis of anomalously coupled nucleosides by addition of purines to unsaturated sugar aldehydes
AU Kaluza, Zbigniew; Chmielewski, Marek; Pedersen, Erik B.
CS Dep. Chem., Odense Univ., Odense, DK-5230, Den.
SO Heterocycles (1988), 27(6), 1313-16
CODEN: HTCYAM; ISSN: 0385-5414
DT Journal
LA English
CC 33-9 (Carbohydrates)
OS CASREACT 110:24222
GI



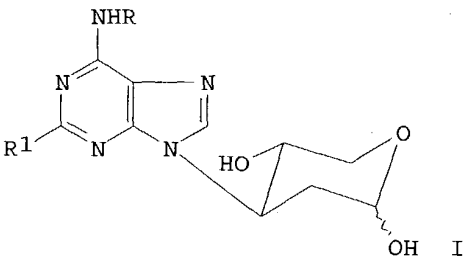
AB α,β-Unsatd. deoxy monosaccharide aldehydes I (R = H, OAc) underwent a Michael reaction with 6-(4-chlorophenylamino)-2-methylpurine and theophylline to give isonucleosides, e.g., II.
ST isonucleoside; purine addn unsatd monosaccharide aldehyde; Michael purine unsatd monosaccharide aldehyde
IT Michael reaction
(of unsatd. monosaccharide aldehydes with purines, isonucleosides from)
IT Nucleosides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(iso-, preparation of, by Michael reaction of unsatd. monosaccharide aldehydes with purines)
IT 118203-96-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with (chlorophenylamino)methylpurine)
IT 118203-97-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with (chlorophenylamino)methylpurine and theophylline)
IT 58-55-9, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with glucal derivative)
IT 97314-41-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with unsatd. monosaccharide aldehydes)
IT 118117-04-7P 118117-05-8P **118117-06-9P** 118117-07-0P
118149-39-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 118203-98-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (4-chlorophenylamino)methylpurine)
IT **118117-06-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)
RN 118117-06-9 HCAPLUS
CN β-D-threo-Hexopyranose, 3-[6-[(4-chlorophenyl)amino]-9H-purin-9-yl]-2,3,4-trideoxy-, 6-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L31 ANSWER 56 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1987:5366 HCAPLUS
DN 106:5366
ED Entered STN: 11 Jan 1987
TI Anomalously coupled nucleosides. I. Tributylammonium phosphates in chloroform for direct coupling of 2-deoxy-D-ribose with N6-substituted adenines
AU Andersen, Jesper; Pedersen, Erik B.
CS Dep. Chem., Odense Univ., Odense, DK-5230, Den.
SO Liebigs Annalen der Chemie (1986), (11), 1837-46
CODEN: LACHDL; ISSN: 0170-2041
DT Journal
LA English
CC 33-9 (Carbohydrates)
OS CASREACT 106:5366
GI



I

AB P2O5 reacts with H2O and Bu3N in CHCl3 to give a homogeneous solution of tributylammonium phosphate, pyrophosphate, and trimetaphosphate. 3-(9-Adenyl)-threo-pentopyranoses I (R = Ph, substituted Ph, furfuryl; R1

= H, Me) precipitate on treatment of 2-deoxy-D-ribose with the N6-substituted adenines in this solution at 40° after 7 days.

ST deoxyribose coupling adenine tributylammonium phosphate; purinylpentopyranose; nucleoside pentapyranose

IT Nucleosides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(purinylpentopyranoses, preparation of, by nucleoside coupling in presence of tributylammonium phosphates)

IT Coupling agents
(tributylammonium phosphates for nucleosides)

IT 525-79-1 1210-66-8 5446-36-6 6296-90-8 82760-82-5 96960-71-3 97314-41-5 97314-43-7 97314-45-9 97314-46-0 97314-47-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with deoxyribose in presence of tributylammonium phosphates)

IT 533-67-5, 2-Deoxy-D-ribose
RL: RCT (Reactant); RACT (Reactant or reagent)
(nucleoside coupling of, in presence of tributylammonium phosphates)

IT 104091-37-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

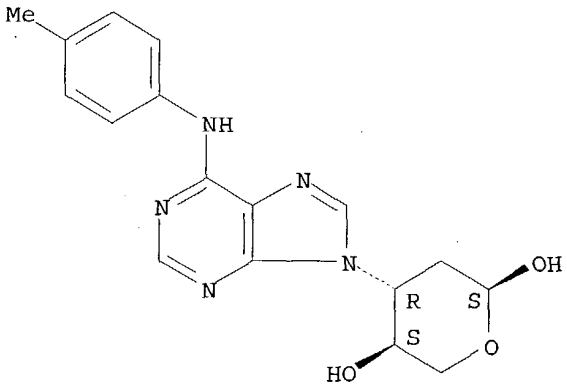
IT 104091-17-0P **104091-18-1P** 104091-19-2P 104091-20-5P
104091-21-6P 104091-22-7P 104091-23-8P 104091-24-9P 104091-25-0P
104091-26-1P 104091-27-2P **104091-28-3P** 104091-29-4P
104091-30-7P 104091-31-8P 104091-32-9P 104091-33-0P 104091-34-1P
104091-35-2P 104091-36-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by nucleoside coupling in presence of tributylammonium phosphates)

IT **104091-18-1P 104091-28-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by nucleoside coupling in presence of tributylammonium phosphates)

RN 104091-18-1 HCAPLUS

CN α-D-threo-Pentopyranose, 2,3-dideoxy-3-[6-[(4-methylphenyl)amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

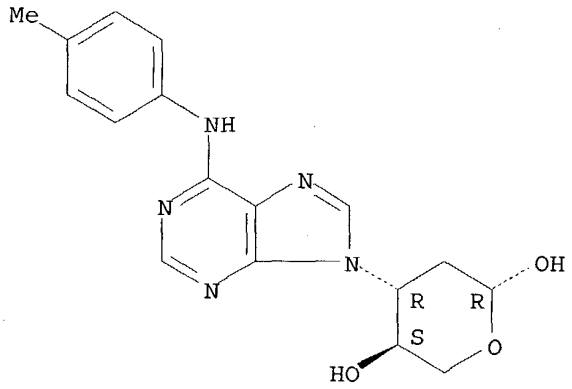
Absolute stereochemistry.



RN 104091-28-3 HCAPLUS

CN β-D-threo-Pentopyranose, 2,3-dideoxy-3-[6-[(4-methylphenyl)amino]-9H-purin-9-yl]- (9CI) (CA INDEX NAME)

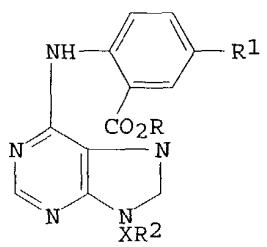
Absolute stereochemistry.



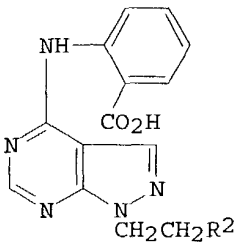
L31 ANSWER 57 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1977:568097 HCAPLUS
DN 87:168097
ED Entered STN: 12 May 1984
TI Purine and pyrazolopyrimidine derivatives
IN Regnier, Gilbert; Canevari, Roger; Poignant, Jean Claude; Laubie, Michel
PA Science Union et Cie., Societe Francaise de Recherche Medicale, Fr.
SO Ger. Offen., 19 pp.
CODEN: GWXXBX
DT Patent
LA German
IC C07D487-04
CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2651789	A1	19770602	DE 1976-2651789	19761112
	DE 2651789	C2	19840913		
	GB 1544419	A	19790419	GB 1975-47618	19751119
	FR 2332020	A1	19770617	FR 1976-34552	19761117
	FR 2332020	B1	19801010		
	BE 848505	A1	19770518	BE 1976-172495	19761118
	ES 453460	A1	19771116	ES 1976-453460	19761118
	AU 7619757	A1	19780525	AU 1976-19757	19761118
	AU 508926	B2	19800417		
	JP 54039396	B4	19791127	JP 1976-139012	19761118
	JP 52065296	A2	19770530		
	IL 50938	A1	19800630	IL 1976-50938	19761118
	CA 1083148	A1	19800805	CA 1976-265988	19761118
	NL 7612894	A	19770523	NL 1976-12894	19761119
	CH 596210	A	19780315	CH 1976-14587	19761119
PRAI	GB 1975-47618		19751119		

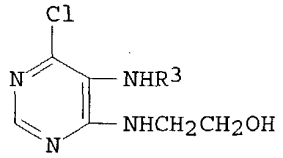
GI



I



II



III

AB Purines I [R = R1 = H, R2 = OH, Cl, X = CH2CH2, CH2CHMe, (CH2)4, (CH2)5, CHMeCH2, CH(CHMe2)CH2; R = R1 = H, R2 = OH, X = (CH2)3, CH(CH2CHMe2)CH2; R = R1 = H, R2 = OMe, SMe, X = CH2CH2; R = H, R1 = Cl, Me, R2 = Cl, X = CH2CH2; R = Et, R1 = H, R2 = OH, Cl, X = CH2CH2] and pyrazolopyrimidines II (R2 = OH, Cl) were prepared for use as central nervous system depressants, anticonvulsants, muscle relaxants, and cardiovascular active agents (no data). Thus, pyrimidine III (R3 = H) was formylated, the product III (R = CHO) cyclized with POCl3, and the product 9-chloroethyl-6-chloropurine treated with 2-H2NC6H4CO2H to give I (R = R1 = H, R2 = Cl, X = CH2CH2).

ST purinylaminobenzoate; central depressant purinylaminobenzoate; anticonvulsant purinylaminobenzoate; muscle relaxant purinylaminobenzoate; cardiovascular purinylaminobenzoate; pyrazolopyrimidinylaminobenzoate

IT Anticonvulsants and Antiepileptics
Central nervous system depressants
Muscle relaxants and Spasmolytics
(purinylaminobenzoates)

IT Heart
(purinylaminobenzoates effect on)

IT Blood vessel
(purinylaminobenzoates effect on, of heart)

IT 6623-88-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(formylation of)

IT 64127-02-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of, with phosphorus oxychloride)

IT 64127-00-0P 64127-09-9P 64127-13-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with anthranilic acid)

IT 64127-01-1P 64127-03-3P 64127-04-4P 64127-05-5P 64127-06-6P
64127-07-7P 64127-08-8P 64127-10-2P 64127-12-4P 64127-14-6P
64127-16-8P 64127-18-0P **64127-19-1P** 64127-20-4P
64127-21-5P 64127-23-7P 64127-25-9P 64127-27-1P 64127-28-2P
64127-30-6P 64127-32-8P 64127-34-0P 64127-36-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 944-81-0 1670-62-8 5882-70-2 36817-67-1 64127-11-3 64127-15-7

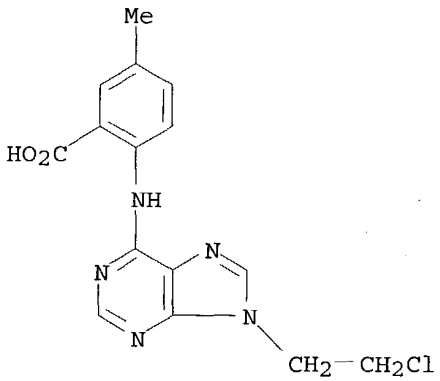
64127-17-9 64127-22-6 64127-24-8 64127-26-0 64127-29-3
64127-31-7 64127-33-9 64127-35-1 64127-37-3 75166-59-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with anthranilic acid)

IT 87-25-2 89-77-0 2305-36-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloropurine derivs.)

IT 118-92-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloropurines)

IT **64127-19-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 64127-19-1 HCAPLUS
CN Benzoic acid, 2-[[9-(2-chloroethyl)-9H-purin-6-yl]amino]-5-methyl- (9CI) (CA INDEX NAME)



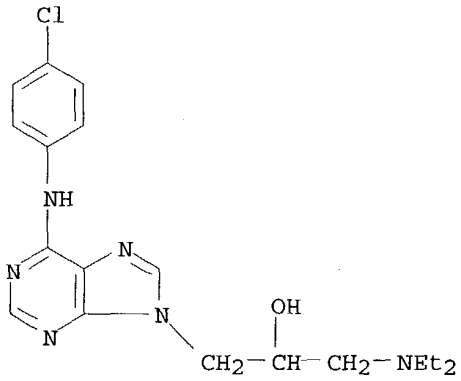
L31 ANSWER 58 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1969:4054 HCAPLUS
DN 70:4054
ED Entered STN: 12 May 1984
TI Synthesis of potential antimalarial agents. I. 6- and 6,9-Disubstituted purines
AU Temple, Carroll, Jr.; Laseter, Anne G.; Montgomery, John A.
CS Kettering-Meyer Lab., Southern Res. Inst., Birmingham, AL, USA
SO Journal of Medicinal Chemistry (1968), 11(6), 1213-15
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
AB Purines (49) containing antimalarial side chains, such as NH(CH2)3NBu2, in the 6 or 6 and 9 positions are prepared from 6-chloropurine and 5-amino-4,6-dichloropyrimidine. Screening results are incomplete, but no significant activity has yet been observed by the compds. against mice infected with a lethal dose of Plasmodium berghei.
ST purines prepn
IT Malaria
(antimalarial substances, purines as)
IT 19270-92-9P 19270-93-0P 19270-94-1P 19270-95-2P 19270-96-3P
19270-97-4P 19270-99-6P 19271-00-2P 19271-01-3P 19271-02-4P
19271-03-5P **19271-04-6P** 21266-62-6P 21266-64-8P
21266-65-9P 21266-66-0P 21266-67-1P 21267-81-2P 21267-83-4P

21267-84-5P 21267-86-7P 21267-89-0P 21267-90-3P 21267-91-4P
21267-92-5P 21267-93-6P **21267-94-7P** 21267-95-8P
21267-97-0P 21267-98-1P 21267-99-2P 21268-01-9P 21268-02-0P
21268-03-1P **21268-04-2P** 21268-06-4P 21268-08-6P
21268-09-7P 21268-11-1P 21268-12-2P 21268-13-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT **19271-04-6P 21267-94-7P 21268-04-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 19271-04-6 HCAPLUS

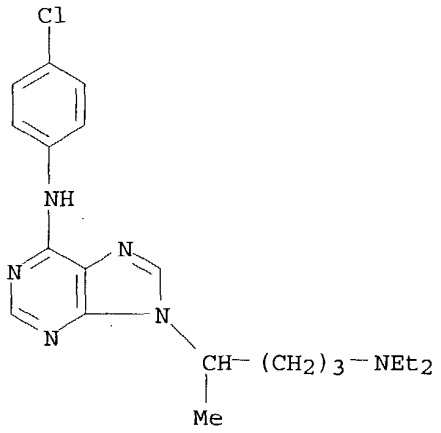
CN 9H-Purine-9-ethanol, 6-[(4-chlorophenyl)amino]-α-[(diethylamino)methyl]-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

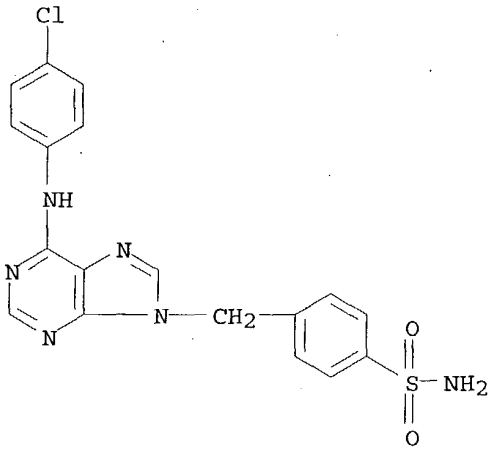
RN 21267-94-7 HCAPLUS

CN Adenine, N-(p-chlorophenyl)-9-[4-(diethylamino)-1-methylbutyl]-, dihydrochloride (8CI) (CA INDEX NAME)



● 2 HCl

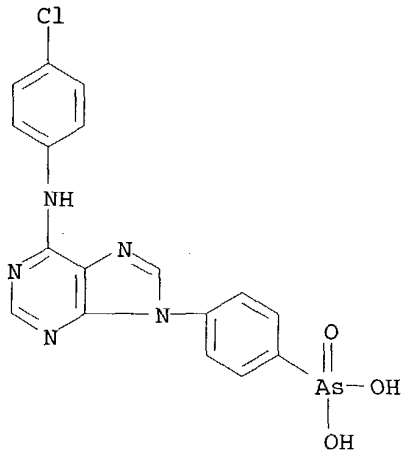
RN 21268-04-2 HCAPLUS
CN p-Toluenesulfonamide, α-[6-(p-chloroanilino)-9H-purin-9-yl]-, monohydrochloride (8CI) (CA INDEX NAME)



● HCl

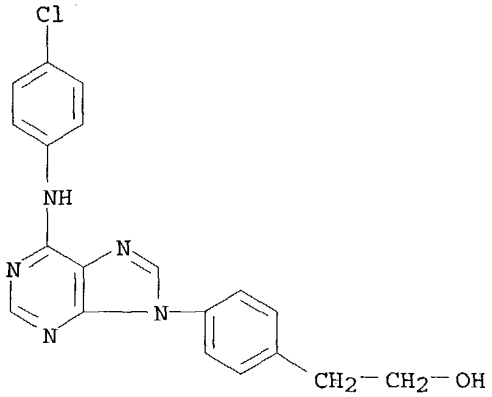
L31 ANSWER 59 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1968:39747 HCAPLUS
DN 68:39747
ED Entered STN: 12 May 1984
TI Synthesis of purine and pyrimidine derivatives of arsonic acid
AU Yuki, Hidetaka; Kishikawa, Torahiko; Tohira, Yasuo; Watanabe, Kazuhiro
CS Chugai Pharm. Co., Ltd., Tokyo, Japan
SO Chemical & Pharmaceutical Bulletin (1967), 15(7), 1052-5

CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
CC 29 (Organometallic and Organometalloidal Compounds)
GI For diagram(s), see printed CA Issue.
AB To prepare the title compds., 2-amino-4,6-dichloropyrimidine was treated with arsanilic acid in the presence of HCl to give N-(2-amino-4-chloro-6-pyrimidinyl)arsanilic acid (I). 5-Amino-4,6-dichloropyrimidine also reacted with 1 mole arsanilic acid to afford N-(5-amino-4-chloro-6-pyrimidinyl)arsanilic acid with the second chlorine unchanged, but once it was cyclized to p-(6-chloro-9H-purin-9-yl)benzenearsonic acid (II) the chlorine atom regained activity and was easily replaced by primary and secondary amines. 6-Chloropurine was also treated with arsanilic acid to yield N-(6-purinyl)arsanilic acid.
ST PURINE ARSONIC ACID DERIVS; ARSONIC ACID PYRIMIDINE DERIVS; PYRIMIDINE ARSONIC ACID DERIVS
IT 9H-Purine, arsanilic and benzenearsonic acid derivs.
Purine, arsanilic acid derivs.
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 17053-53-1P 17053-54-2P 17053-55-3P 17053-56-4P 17053-57-5P
17053-58-6P 17053-59-7P 17053-60-0P 17053-61-1P 17053-62-2P
17053-63-3P 17053-64-4P 17053-65-5P 17053-66-6P 17053-67-7P
17053-68-8P 17053-69-9P 17053-70-2P 17053-71-3P
17053-72-4P 17053-73-5P 17169-95-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **17053-68-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 17053-68-8 HCAPLUS
CN Benzenearsonic acid, p-[6-(p-chloroanilino)-9H-purin-9-yl]- (8CI) (CA INDEX NAME)



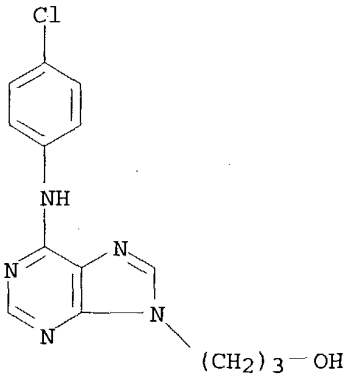
L31 ANSWER 60 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1967:414888 HCAPLUS
DN 67:14888
ED Entered STN: 12 May 1984
TI Resolution of complex purine and pyrimidine antagonist mixtures by

thin-layer chromatography
AU Chou, Tsung-Chu; Lin, Hsi Hu
CS Saint Joseph's Coll., Philadelphia, PA, USA
SO Journal of Chromatography (1967), 27(1), 307-10
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
CC 64 (Pharmaceutical Analysis)
AB A thin-layer chromatographic technique is described by which complex purine and pyrimidine antagonist mixts. are separated The sepns. are carried out by anion-exchange chromatog. on MN 300G/ECTEOLA and MN 300G/DEAE thin layers. Rf values of 8 purine and pyrimidine antagonists at pH 7.5 on 3 different thin layers are given along with identification limits, fluorescent colors, and uv absorption maximum data of these compds. The completeness of the resolution depends not only on the composition of the mixture being analyzed, but also on the character of the thin layer.
ST PURINE ANTAGONIST MIXTS SEPN; PYRIMIDINE ANTAGONIST MIXTS SEPN; CHROMATOG PURINE PYRIMIDINE ANTAGONISTS
IT Purine, derivs.
Pyrimidine, derivs.
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
IT 5462-86-2 **16208-00-7** 16208-01-8 16208-02-9 16208-03-0 16208-04-1 16208-05-2 16267-08-6
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
IT **16208-00-7**
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
RN 16208-00-7 HCAPLUS
CN Phenethyl alcohol, p-[6-(p-chloroanilino)-9H-purin-9-yl]- (8CI) (CA INDEX NAME)



L31 ANSWER 61 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1965:23585 HCAPLUS
DN 62:23585
OREF 62:4270c-d
ED Entered STN: 22 Apr 2001
TI Enzyme inhibitors VI. Studies on the bulk tolerance of adenosine deaminase for 6-substituted amino-9-(3-hydroxypropyl)purines

AU Schaeffer, Howard J.; Vince, Robert
CS State Univ. of New York, Buffalo
SO Journal of Medicinal Chemistry (1965), 8(1), 33-5
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 57 (Enzymes)
AB cf. J. Pharm. Sci. 53(11), 1368-70, 1371-4, 1510(1964). In order to study the ability of adenosine deaminase to tolerate bulk at the 6-position of certain purine nucleoside analogs, several 6-substituted amino-9-(3-hydroxypropyi)purines were prepared These compds. were synthesized by allowing 6-chloro-9-(3-hydroxypropyl)purine to react with the appropriate amines. Enzymic evaluation of these compds. revealed that increasing the size of the substituent on the 6-amino group decreased the inhibitory property of the compound These results establish that adenosine deaminase has little bulk tolerance for substituents on the 6-amino group of the purine nucleus.
IT Adenosine deaminase
(inhibition by 6-amino-9-(3-hydroxypropyl)-purines, amino substituent effect on)
IT 711-64-8, 9H-Purine-9-propanol, 6-amino- 944-81-0, 9H-Purine-9-propanol, 6-chloro- 947-78-4, 9H-Purine-9-propanol, 6-(methylamino)- 954-87-0, 9H-Purine-9-propanol, 6-(propylamino)-, dihydrochloride 964-27-2, 9H-Purine-9-propanol, 6-anilino- **967-00-0**, 9H-Purine-9-propanol, 6-(p-chloroanilino)- 967-01-1, 9H-Purine-9-propanol, 6-(benzylamino)- 1133-35-3, Purine-7-propanol, 6-chloro- 1144-14-5, 9H-Purine-9-propanol, 6-(isopropylamino)-, dihydrochloride 1147-38-2, 9H-Purine-9-propanol, 6-(tert-butylamino)- 92333-90-9, Purine-7-propanol, 6-amino-, hydrochloride
(preparation and adenosine deaminase inhibition by)
IT **967-00-0**, 9H-Purine-9-propanol, 6-(p-chloroanilino)-
(preparation and adenosine deaminase inhibition by)
RN 967-00-0 HCAPLUS
CN 9H-Purine-9-propanol, 6-(p-chloroanilino)- (7CI, 8CI) (CA INDEX NAME)



L31 ANSWER 62 OF 62 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1961:54328 HCAPLUS
DN 55:54328
OREF 55:10460a-i,10461a-c
ED Entered STN: 22 Apr 2001
TI Synthesis of potential anticancer agents. XXVI. The alkylation of 6-chloropurine

110-15° in a bomb yielded 680 mg. 9H-purine-9-acetamide (VIII), m. 245° (decomposition); 170 mg. 2nd crop. VI (500 mg.) in 5 cc. 95% N_2H_4 stirred 1 hr. at room temperature, diluted with 20 cc. EtOH, and kept 1 hr. at room temperature gave 270 mg. hydrazide (IX) of VII, m. 177° (EtOH); 130 mg. 2nd crop. III (2.00 g.) in 50 cc. alc. NH_3 (saturated at 1°) heated 18 hrs. at 120-5° in a bomb gave 1.13 g. 6-NH_2 derivative of VIII.H_2O, m. above 264° (H_2O). III (1.00 g.) added portionwise with stirring during 5 min. to 5.0 cc. 95% N_2H_4, stirred 20 min., and filtered gave 470 mg. 6-$NHNH_2$ derivative of IX, m. above 264° (H_2O); 40 mg. 2nd crop. III (1.00 g.) in 10 cc. N HCl refluxed 1 hr. gave 540 g. mg. 6-OH derivative of VII, m. above 264° (H_2O): 120 mg. 2nd crop. III (1.00 g.) in 20 cc. MeOH containing 500 mg. NaOMe refluxed 1 hr., and acidified with 3N HCl yielded 420 mg. 6-MeO derivative of VII, m. 246-8° (decomposition). III (1.00 g.) and 50 cc. liquid NH_3 refluxed 4 hrs. and evaporated, and the residue boiled in 75 cc. dioxane and refrigerated yielded 490 mg. derivative of VIII, m. 229-31° (decomposition); 160 mg. 2nd crop. Et 6-mercapto-9H-purine-9-acetate (X) added with stirring to 5.0 cc. 95% N_2H_4, stirred 15 min. at room temperature, diluted with 25 cc. H_2O, and acidified with AcOH to pH 5 gave 750 mg. hydrazide (XI) of 6-mercapto-9H-purine-9-acetic acid (XII), m. above 264°. XI (410 mg.) in 18.0 cc. 0.1N HCl treated at 24° with stirring with 130 mg. $NaNO_2$ in 2 cc. H_2O, and stirred 15 min. gave 350 mg. azide, which exploded at 142-4°; a 290-mg. portion in 20 cc. EtOH refluxed 4 hrs. gave 31 mg. Et N-(6-mercapto-9H-purin-9-ylmethyl)carbamate, m. 217° (EtOH). X (2.00 g.) in 20 cc. Me_2SO containing 1.19 g. K_2CO_3 stirred 1 hr. with 2.0 cc. MeI, diluted with 80 cc. H_2O, and filtered yielded 1.14 g. Et 6-methylthio-9H-purine-9-acetate, m. 119° (cyclohexane). X (1.00 g.) in 10 cc. N NaOH kept 0.5 hr. at room temperature, neutralized with dilute H_2SO_4, and filtered yielded 830 mg. XII, m. above 264°.

IT Cancer
(inhibitors of)

IT Alkylation
(of 6-chloropurines)

IT 9H-Purine-9-acetamide, 6-mercapto-

IT Isoalloxazine, 8-methyl-
(derivs., reaction with aldehydes)

IT 87-42-3, Purine, 6-chloro-
(alkylation of)

IT 34396-99-1, 9H-Purine-9-acetic acid, 6-mercapto- 98550-24-4, 9H-Purine-9-acetic acid
(and derivs.)

IT 1670-62-8, 9H-Purine-9-ethanol, 6-chloro- 1928-76-3, 9H-Purine, 9-benzyl-6-chloro- 1928-77-4, Purine, 7-benzyl-6-chloro- 3691-50-7, Adenine, 7-benzyl- 4261-14-7, Adenine, 9-benzyl- 5462-86-2, 9H-Purine, 6-chloro-9-ethyl- 6268-73-1, 9H-Purine, 9-benzyl-6-hydrazino- 6277-53-8, 9H-Purine-9-acetic acid, 6-hydrazino-, hydrazide 6298-52-8, 9H-Purine-9-acetic acid, 6-methoxy- 6298-53-9, 9H-Purine-9-acetic acid, 6-hydroxy- 6332-42-9, Adenine, 9-benzyl-N6,N6-dimethyl- 6937-62-8, 9H-Purine, 9-benzyl-6-methoxy- 6973-54-2, 9H-Purine-9-ethanol, 6-chloro-, acetate 6991-06-6, Hypoxanthine, 7-benzyl- 7332-91-4, Adenine, 7-benzyl-N6,N6-dimethyl- 13516-49-9, Purine, 7-benzyl-6-hydrazino- 14013-11-7, Hypoxanthine, 9-benzyl- 15948-97-7, Pyrimidine, 5-amino-4-benzylamino-6-chloro- 17447-84-6, 9H-Purine-6-thiol, 9-benzyl- 18346-06-0, Purine, 7-benzyl- 21802-76-6, Purine, 7-benzyl-6-methoxy- 21885-56-3, Purine-6-thiol, 7-benzyl- 25491-56-9, 9H-Purine, 9-benzyl- 33359-05-6, 9H-Purine-9-acetic acid, 6-(methylthio)-, ethyl ester 56046-30-1, Adenine, 9-benzyl-N6-ethyl- 56791-59-4, 9H-Purine-9-acetic acid, 6-chloro-, ethyl ester 64127-00-0, 9H-Purine, 6-chloro-9-(2-chloroethyl)- 74972-79-5, Purine, 6-chloro-7-ethyl- 79948-26-8, Adenine, 7-benzyl-N6-ethyl- 98273-93-9,

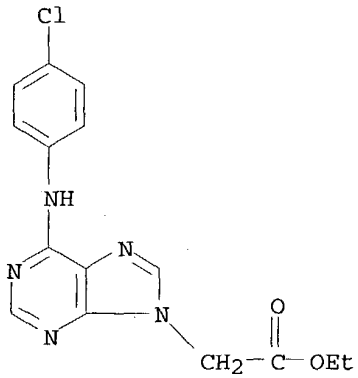
AU Montgomery, John A.; Temple, Carroll, Jr.
CS Southern Research Inst., Birmingham, AL
SO Journal of the American Chemical Society (1961), 83, 630-5
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
CC 10G (Organic Chemistry: Heterocyclic Compounds)
AB cf. CA 55, 9420d. A new procedure was developed for the preparation of 9-alkylpurines by the alkylation of 6-chloropurine (I) with various substituted alkyl halides in Me2SO; smaller amts. of the 7-alkylpurines were obtained as by-products. The N-substituted-6-chloropurines were converted to a number of derivs. for anticancer screening. I and the alkyl halide in 10 cc. Me2SO/millimole I treated with 1.0-1.1 millimoles K2CO3, refluxed (or kept at room temperature), cooled, and diluted with H2O, and the product isolated with Et2O (or Skellysolve C), or the aqueous reaction mixture filtered, the residue washed with Me2SO, the combined filtrates evaporated in vacuo, and the final residue extracted with Et2O or with CHCl3 gave the corresponding alkylation product. In this manner were prepared the following 9-substituted-6-chloropurines (substituent, reaction time in hrs., reaction temperature, molar ratio of halide to I, m.p. of product, and % yield given): Et, 2, 26°, 2.0, 81-4°, 50; HOCH2CH2, 1.5, 90°, 2.0, 154-7°, 20 (contaminated with 7-isomer); AcOCH2CH2, 15, 26°, 1.4, 74-6°, 46; PhCH2 (II), 3, 26°, 2.0, 86-7°, 38; ClCH2CH2, 2.5, 26°, 1.1, 108°, 19; NCCH2, 1, 50°, 1.2, 134-5°, 35; EtO2CCH2 (III), 2, 26°, 1.1, 93-5°, 35. As by-products were obtained 6-chloro-7-ethyl-7H-purine, 4.7%, m. 122-3°, and 7-benzyl-6-chloro-7H-purine (IV), 15%, m. 152-3°. IV was converted in the usual manner with a series of nucleophilic reagents to the following 6-substituted-7-benzyl-7H-purines (substituent, reagent, reaction time in hrs., % yield, and m.p. given): OH, N NaOH, 1, 93, above 260°; MeO, MeONa-MeOH, 2, 88, 126-7°; EtNH, 70% aqueous EtNH2, 1, 74, 249-50° (decomposition) (N HCl); p-ClC6H4NH, p-ClC6H4-NH2-PrOH, 2, 72, 234-5°; NHNH2, 95% N2H4, 0.25 (at room temperature), 88, - (indefinite); NH2, alc. NH3 saturated at 0°, 16 (at 125-30° in bomb), 87, 238-9° (decomposition) (H2O); H, H over Pd-C, 0.3 (at room temperature), 68, 145-6° (H2O); SH, (H2N)2CS-PrOH, 2 (at room temperature), 57, 265-6° (precipitated from N NaOH with AcOH); Me2N, 25% aqueous Me2NH, 1.5, 77, 134-5° (1:2 C6H6-Skellysolve). The runs were performed at the b.p. of the solution except where stated otherwise. Similarly were prepared the following 6-substituted-9-benzyl-9H-purines (same data given): OH, N HCl, 1, 87, above 260°; OH, 2N NaOH, 1, 69 (and 16% 5-amino-4-benzylamino-6-chloropyrimidine), -; MeO, NaOMe-MeOH, 1, 96, 128°; NH2, alc. NH3 saturated at 0°, 16 (at 130° in bomb), 73, 235° (aqueous EtOH); EtNH, 70% aqueous EtNH2, 2, 73, - (indefinite) (N HCl); p-ClC6H4NH, p-ClC6H4NH2-PrOH, 1, 82, 195-6°; NHNH2, 95% N2H4, 0.2 (at room temperature), 91, 209-10°; H, H over Pd-C, 0.25 (at room temperature), 85, 100-1° (Et2O); SH, (H2N)2CS-PrOH, 2, 93, above 260°; Me2N, 25% aqueous Me2NH, 1, 77, 131-2°. Similarly were prepared the following 6-substituted Et 9H-purine-9-acetate (same data given): H, H over Pd-C, - (at room temperature), 81, 121-2° (Skellysolve C); p-ClC6H4NH, p-ClC6H4NH2-PrOH, 1, 64, 184-5° (Skellysolve C); SH (V), (H2N)2CS-EtOH, 1, 88, above 260° (EtOH); and 6-mercapto-9H-purine-9-acetamide, (H2N)2CS-EtOH, 1, 81, above 260° (precipitated from 0.3N NaOH with AcOH). Et 9H-purine-9-acetate (VI) (2.00 g.) in 50 cc. saturated aqueous Ba(OH)2 kept 4 hrs. at room temperature, neutralized with N H2SO4, treated with 51 cc. 0.191N H2SO4, and worked up gave 1.36 g. 9H-purine-9-acetic acid (VII), m. 256-7° (decomposition) (EtOH). VII (1.12 g.) in 50 cc. alc. NH3 (saturated at 1°) and heated 16 hrs. at

9H-Purine-9-acetamide, 6-chloro- 98277-56-6, 9H-Purine-9-acetamide, 6-amino- 98550-78-8, Purine-7-ethanol, 6-chloro- 98949-75-8, Carbamic acid, [(6-mercapto-9H-purin-9-yl)methyl]-, ethyl ester 99595-72-9, 9H-Purine-9-acetamide 100114-80-5, 9H-Purine-9-acetonitrile, 6-chloro- **101103-22-4**, 9H-Purine-9-acetic acid, 6-p-chloroanilino-, ethyl ester 109394-60-7, Adenine, 7-benzyl-N6-(p-chlorophenyl)- **111355-18-1**, Adenine, 9-benzyl-N6-(p-chlorophenyl)-
(preparation of)

IT **101103-22-4**, 9H-Purine-9-acetic acid, 6-p-chloroanilino-, ethyl ester **111355-18-1**, Adenine, 9-benzyl-N6-(p-chlorophenyl)-
(preparation of)

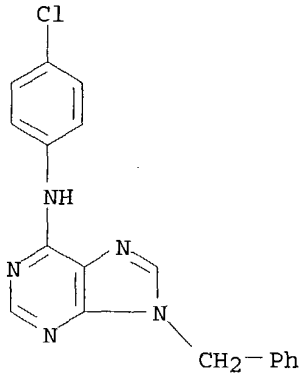
RN 101103-22-4 HCAPLUS

CN 9H-Purine-9-acetic acid, 6-p-chloroanilino-, ethyl ester (6CI) (CA INDEX NAME)



RN 111355-18-1 HCAPLUS

CN Adenine, 9-benzyl-N6-(p-chlorophenyl)- (6CI) (CA INDEX NAME)



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CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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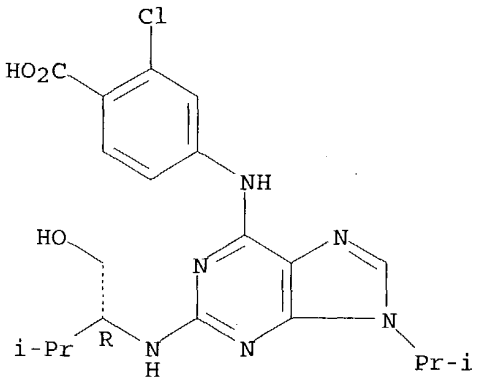
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs hitstr l32 tot

L32 ANSWER 1 OF 28 USPATFULL on STN
AN 2003:265206 USPATFULL
TI Phage display affinity filter and forward screen
IN Lockhart, David J., Del Mar, CA, UNITED STATES
Treiber, Daniel Kelly, San Diego, CA, UNITED STATES
Zarrinkar, Patrick Parvis, San Diego, CA, UNITED STATES
PI US 2003186221 A1 20031002
AI US 2002-115442 A1 20020402 (10)
DT Utility
FS APPLICATION
LREP Kate H. Murashige, Morrison & Foerster LLP, Suite 500, 3811 Valley Centre Drive, San Diego, CA, 92130
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1022
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides an affinity filter for the binding of phage-displayed proteins to dissolved target molecules. The phage-displayed proteins are contacted with immobilized target in the presence and absence of dissolved target; the behavior of the phage-displayed proteins as a function of concentration of dissolved target permits approximation of the affinity of the phage-displayed protein for target. The invention also provides a method to screen large numbers of compounds for their ability to compete with a compound known to bind a phage-displayed protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(Kd determination for dissociation of CDK2 kinase and immobilized purvalanol in
presence of; phage display affinity filter and forward screen using immobilized and dissolved target mols.)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



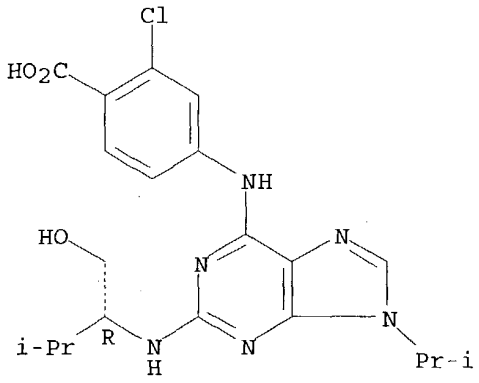
IT **212844-54-7D**, Purvalanol B, immobilized

(Kd determination for dissociation of CDK2 kinase and, in presence of free purvalanol; phage display affinity filter and forward screen using immobilized and dissolved target mols.)

RN 212844-54-7 USPATFULL

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L32 ANSWER 2 OF 28 USPATFULL on STN

AN 2003:257723 USPATFULL

TI Exploiting genomics in the search for new drugs

IN Lockhart, David J., Del Mar, CA, UNITED STATES
Wodicka, Lisa, San Diego, CA, UNITED STATES
Ho, Ming Hsiu, San Jose, CA, UNITED STATES

PA Affymetrix, Inc., Santa Clara, CA (U.S. corporation)

PI US 2003180774 A1 20030925

AI US 2003-370717 A1 20030224 (10)

RLI Division of Ser. No. US 2001-900845, filed on 6 Jul 2001, GRANTED, Pat. No. US 6524800 Division of Ser. No. US 1998-215207, filed on 18 Dec 1998, GRANTED, Pat. No. US 6333155

PRAI US 1997-68289P 19971219 (60)

DT Utility

FS APPLICATION

LREP BANNER & WITCOFF LTD.,, ATTORNEYS FOR AFFYMETRIX, 1001 G STREET , N.W., ELEVENTH FLOOR, WASHINGTON, DC, 20001-4597

CLMN Number of Claims: 79

ECL Exemplary Claim: 1

DRWN 6 Drawing Page(s)

LN.CNT 2048

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The cellular effects of potentially therapeutic compounds are characterized in mammalian cells and yeast. In the latter case the effects can be characterized on a genome-wide scale by monitoring changes in messenger RNA levels in treated cells with high-density oligonucleotide probe arrays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

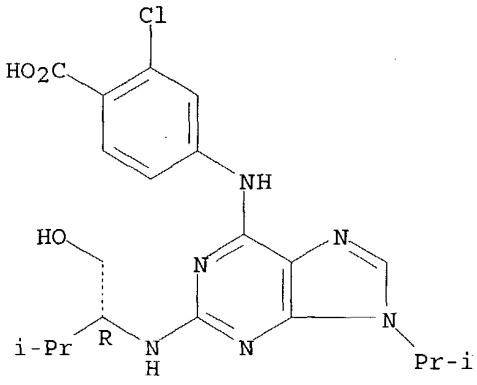
IT **212844-54-7**, Purvalanol B
(genomics in search for new drugs)

RN 212844-54-7 USPATFULL

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-

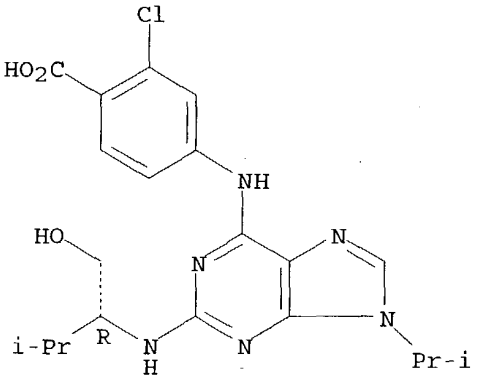
methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 complexes
(genomics in search for new drugs)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

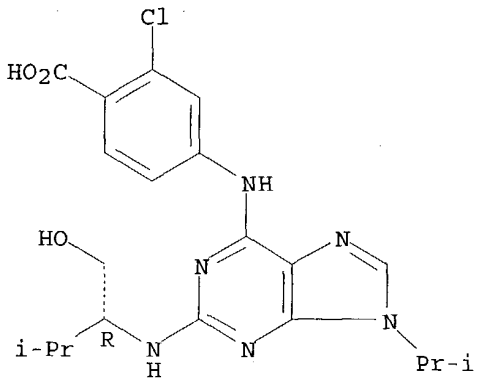


L32 ANSWER 3 OF 28 USPATFULL on STN
AN 2003:251910 USPATFULL
TI Purine inhibitors of protein kinases, G proteins and polymerases
IN Gray, Nathanael S., Berkeley, CA, UNITED STATES
Schultz, Peter, Oakland, CA, UNITED STATES
Kim, Sung-Hou, Moraga, CA, UNITED STATES
Meijer, Laurent, Roscoff, FRANCE
PA The Regents of the University of California, Oakland, CA (U.S. corporation)
PI US 2003176699 A1 20030918
AI US 2003-352752 A1 20030127 (10)
RLI Continuation of Ser. No. US 2001-847007, filed on 1 May 2001, PENDING
Continuation of Ser. No. US 1998-130255, filed on 6 Aug 1998, GRANTED,

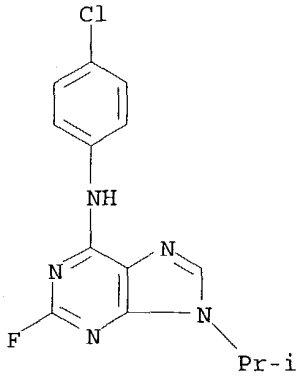
Pat. No. US 6255485
PRAI WO 1998-US16388 19980806
US 1997-55400P 19970807 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1150
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to purine analogs that inhibit, inter alia, protein kinases, G-proteins and polymerases. In addition, the present invention relates to methods of using such purine analogs to inhibit protein kinases, G-proteins, polymerases and other cellular processes and to treat cellular proliferative diseases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7P**, NG 95
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



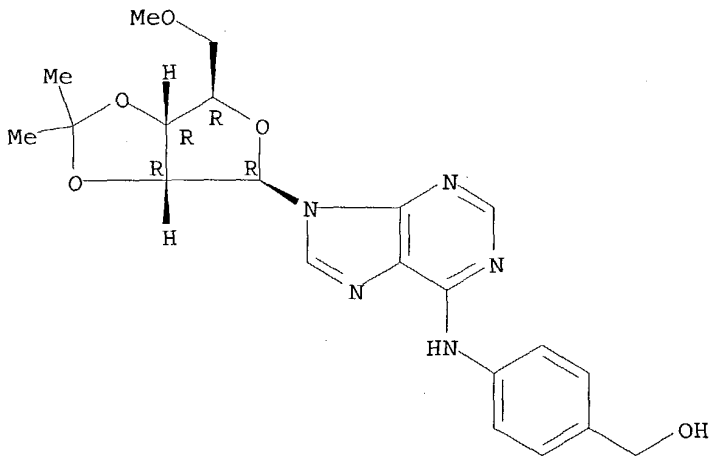
IT **220696-59-3P**
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 220696-59-3 USPATFULL
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L32 ANSWER 4 OF 28 USPATFULL on STN
AN 2003:226333 USPATFULL
TI Chemical compounds
IN Eldred, Colin David, Stevenage, UNITED KINGDOM
Pennell, Andrew Michael Kenneth, San Francisco, CA, UNITED STATES
PA SmithKline Beecham Corporation, Philadelphia, PA, UNITED STATES (non-U.S. corporation)
PI US 2003158146 A1 20030821
AI US 2003-373064 A1 20030226 (10)
RLI Continuation of Ser. No. US 2000-530575, filed on 15 Jun 2000, GRANTED, Pat. No. US 6544960 A 371 of International Ser. No. WO 1998-EP7023, filed on 6 Nov 1998, UNKNOWN
PRAI GB 1997-23590 19971118
DT Utility
FS APPLICATION
LREP BACON & THOMAS, PLLC, 625 SLATERS LANE, FOURTH FLOOR, ALEXANDRIA, VA, 22314
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A compound of formula (I), wherein R.sup.2 represents C.sub.1-3alkyl, halogen or hydrogen; R.sup.3 represents straight or branched alkyl group of 1-6 carbon atoms; with the proviso that, when R.sup.3 represents C.sub.1-3alkyl, R.sup.2 represents C.sub.1-3alkyl, R.sup.1 cannot represent phenyl optionally substituted by one or more substituents selected from halogen, C.sub.1-3alkyl, trifluoromethyl, nitro, cyano, --CO.sub.2R.sup.c, --CONR.sup.cR.sup.d, --COR.sup.c, --SOR.sup.e, --SO.sub.2R.sup.e, --SO.sub.3H, --SO.sub.2NR.sup.cR.sup.d, --OR.sup.c, --NHSO.sub.2R.sup.e, --NHCOR.sup.c and --NR.sup.cR.sup.d; and salts and solvates thereof, in particular, physiologically acceptable solvates and salts thereof. These compounds are agonists at the Adenosine A1 receptor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **223756-68-1P**
(preparation of nucleosides as adenosine A1 receptors)
RN 223756-68-1 USPATFULL
CN Adenosine, N-[4-(hydroxymethyl)phenyl]-5'-O-methyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

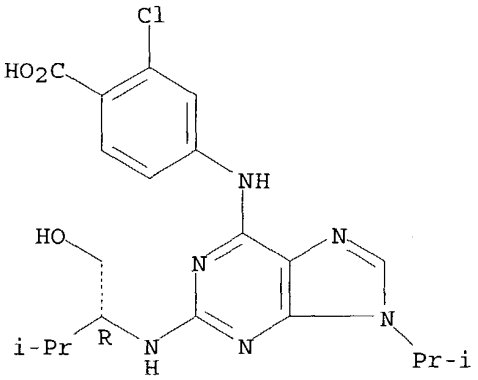
Absolute stereochemistry.



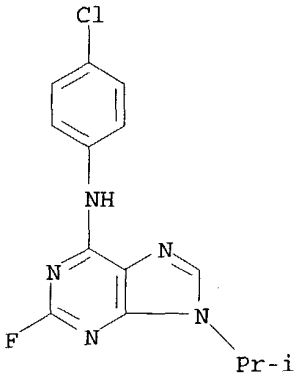
L32 ANSWER 5 OF 28 USPATFULL on STN
AN 2003:166814 USPATFULL
TI Purine inhibitors of protein kinases, G proteins and polymerases
IN Gray, Nathanael S., Berkeley, CA, UNITED STATES
Schultz, Peter, Oakland, CA, UNITED STATES
Kim, Sung-Hou, Moraga, CA, UNITED STATES
Meijer, Laurent, Roscoff, FRANCE
PI US 2003114672 A1 20030619
US 6617331 B2 20030909
AI US 2001-847007 A1 20010501 (9)
RLI Continuation of Ser. No. US 1998-130255, filed on 6 Aug 1998, GRANTED, Pat. No. US 6255485
PRAI US 1997-55400P 19970807 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1142
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to purine analogs that inhibit, inter alia, protein kinases, G-proteins and polymerases. In addition, the present invention relates to methods of using such purine analogs to inhibit protein kinases, G-proteins, polymerases and other cellular processes and to treat cellular proliferative diseases.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7P**, NG 95
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **220696-59-3P**
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 220696-59-3 USPATFULL
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



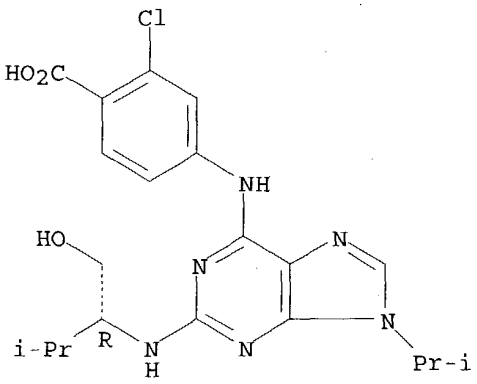
L32 ANSWER 6 OF 28 USPATFULL on STN
AN 2003:148858 USPATFULL
TI Methods of using chemical libraries to search for new kinase inhibitors
IN Gray, Nathanael S., Berkeley, CA, United States
Schultz, Peter, Oakland, CA, United States
Wodicka, Lisa, Santa Clara, CA, United States
Meijer, Laurent, Roscoff, FRANCE
Lockhart, David J., Mountain View, CA, United States
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation)
Centre National de la Recherche Scientifique, Paris, FRANCE (non-U.S. corporation)
PI US 6573044 B1 20030603
AI US 1998-221406 19981222 (9)
PRAI US 1997-55400P 19970807 (60)
US 1997-68798P 19971224 (60)
DT Utility

Searched by Noble Jarrell 272-2556

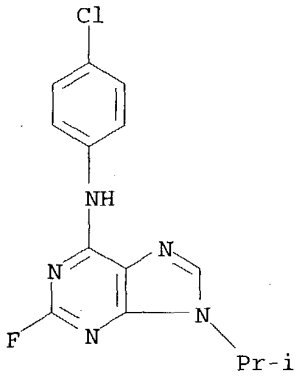
FS GRANTED
EXNAM Primary Examiner: Celsa, Bennett
LREP Townsend & Townsend & Crew LLP
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1897
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The generation of selective inhibitors for specific protein kinases would provide new tools for analyzing signal transduction pathways and possibly new therapeutic agents. We have invented an approach to the development of selective protein kinase inhibitors based on the unexpected binding mode of 2,6,9-trisubstituted purines to the ATP binding site of human CDK2. The most potent inhibitor, purvalanol B (IC.sub.50=6 nM), binds with a 30-fold greater affinity than the known CDK2 inhibitor, flavopiridol. The cellular effects of this class of compounds were examined and compared to those of flavopiridol by monitoring changes in mRNA expression levels for all genes in treated cells of Saccharomyces cerevisiae using high-density oligonucleotide probe arrays.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7P**, NG 95
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **220696-59-3P**
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 220696-59-3 USPATFULL
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)

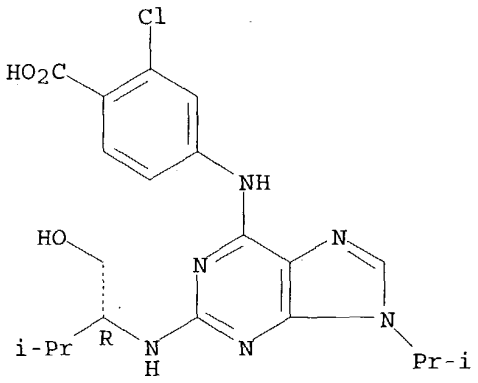


L32 ANSWER 7 OF 28 USPATFULL on STN
AN 2003:146199 USPATFULL
TI Combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins
IN Schaffer, Priscilla A., Boston, MA, UNITED STATES
Schang, Luis M., Edmonton, CANADA
PI US 2003099944 A1 20030529
AI US 2000-905687 A1 20001206 (9)
RLI Continuation-in-part of Ser. No. US 2000-951058, filed on 12 Sep 2000, PENDING Continuation-in-part of Ser. No. US 2000-656592, filed on 7 Sep 2000, PENDING Continuation of Ser. No. WO 1999-US16252, filed on 16 Jul 1999, PENDING
PRAI US 1998-94805P 19980731 (60)
US 1999-131264P 19990427 (60)
US 1999-140926P 19990624 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 38 Drawing Page(s)
LN.CNT 4046
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the identification of cdk inhibitors as inhibitors of pathogen gene expression, replication and reactivation. The invention also relates to the identification of a combination therapy to inhibit pathogen replication in which a drug that inhibits pathogen replication by targeting a specific pathogen-encoded protein is administered in combination with a drug that inhibits pathogen replication by targeting host-encoded cdk proteins. Compositions and assays for the identification and use of such inhibitors are provided as are methods of use of the inhibitors

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(cdk inhibitor; combination therapy involving drugs which target cellular proteins and drugs which target pathogen-encoded proteins for inhibiting replication of pathogens)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA

INDEX NAME)

Absolute stereochemistry.

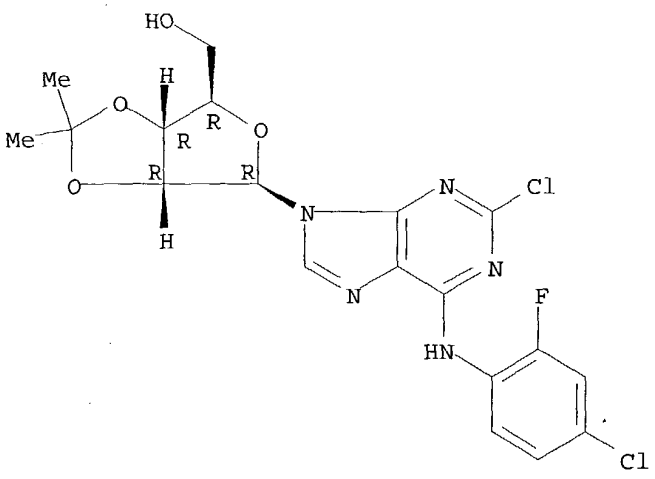


L32 ANSWER 8 OF 28 USPATFULL on STN
AN 2003:140946 USPATFULL
TI Adenosine derivatives
IN Bays, David Edmund, Ware, UNITED KINGDOM
Cousins, Richard Peter Charles, Stevenage, UNITED KINGDOM
Dyke, Hazel Joan, Cambridge, UNITED KINGDOM
Eldred, Colin David, Stevenage, UNITED KINGDOM
Judkins, Brian David, Stevenage, UNITED KINGDOM
Pass, Martin, Macclesfield, UNITED KINGDOM
Pennell, Andrew Michael Kenneth, San Carlos, CA, UNITED STATES
PA Glaxo Wellcome Inc., Research Triangle Park, NC (non-U.S. corporation)
PI US 2003096788 A1 20030522
US 6677316 B2 20040113
AI US 2002-217107 A1 20020813 (10)
RLI Continuation of Ser. No. US 2001-736018, filed on 6 Mar 2001, GRANTED, Pat. No. US 6492348 A 371 of International Ser. No. WO 1999-EP4182, filed on 21 Jun 1999, UNKNOWN
PRAI GB 1998-13554 19980623
DT Utility
FS APPLICATION
LREP BACON & THOMAS, PLLC, 625 SLATERS LANE, FOURTH FLOOR, ALEXANDRIA, VA, 22314
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 4552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of treating a patient suffering from or susceptible to ischemic heart disease, peripheral vascular disease or stroke or which subject is suffering pain, a CNS disorder or sleep apnea which comprises administering a therapeutically effective amount of an adenosine derivative which is an agonist at the adenosine A1 receptor and which exhibits little or no agonist activity of the A3 receptor. The adenosine derivative has a general formula (I) as follows: ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-11-6 253127-16-1**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253127-11-6 USPATFULL

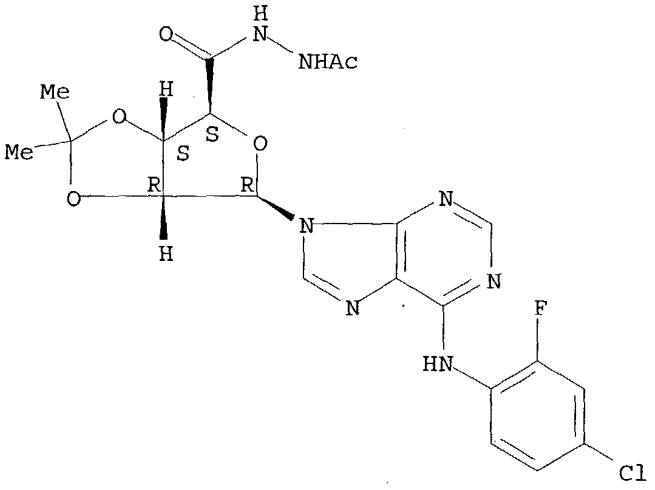
CN Adenosine, 2-chloro-N-(4-chloro-2-fluorophenyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



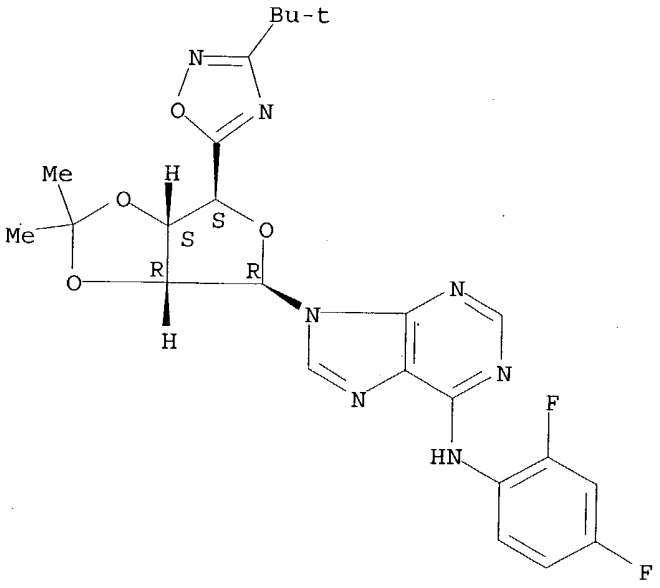
RN 253127-16-1 USPATFULL
CN β-D-Ribofuranuronic acid, 1-[6-[(4-chloro-2-fluorophenyl)amino]-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, 2-acetylhydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



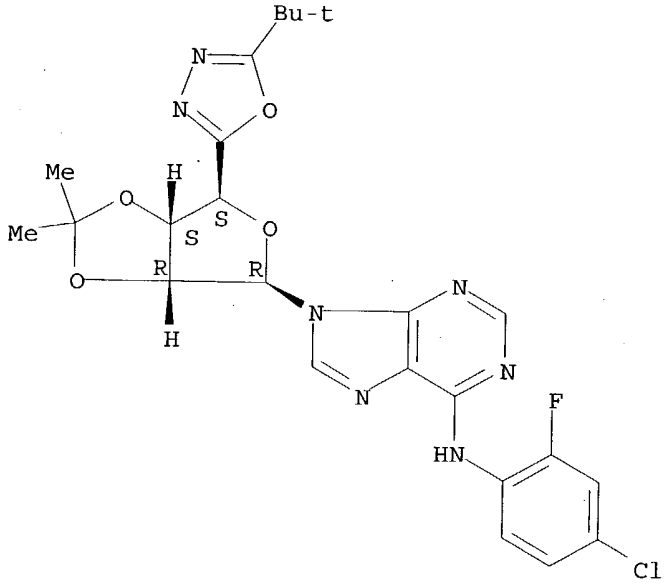
IT **253126-92-0P 253127-02-5P**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253126-92-0 USPATFULL
CN 9H-Purin-6-amine, N-(2,4-difluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[3-(1,1-dimethylethyl)-1,2,4-oxadiazol-5-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

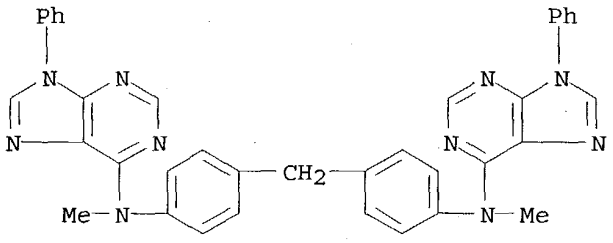


L32 ANSWER 9 OF 28 USPATFULL on STN
AN 2003:106054 USPATFULL
TI Heterocyclic compound and light-emitting device using same
IN Kimura, Keizo, Kanagawa-ken, JAPAN
PA FUJI PHOTO FILM CO., LTD. (non-U.S. corporation)
PI US 2003072965 A1 20030417

AI US 2002-97607 A1 20020315 (10)
PRAI JP 2001-76704 20010317
JP 2001-325594 20011023
DT Utility
FS APPLICATION
LREP SUGHRUE MION, PPLC, 2100 Pennsylvania Avenue, NW, Washington, DC, 20037-3213
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1799
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A light-emitting device comprising a pair of electrodes and one or more organic layers disposed therebetween, the one or more organic layers comprising a light-emitting layer, wherein at least one of the one or more organic layers comprises a compound represented by the following formula (I): ##STR1##

wherein R.sub.11 represents a substituent; R.sub.12 represents a hydrogen atom, an aliphatic hydrocarbon group, an aryl group or a heterocyclic group; R.sub.13 represents a hydrogen atom or a substituent; n represents an integer of 0 to 2; L represents a single bond or a linking group; and m represents an integer of 2 or more.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **476169-90-1**
(electroluminescent devices with good storage stability and brightness containing hetero compds. having multiple purine structures)
RN 476169-90-1 USPATFULL
CN 9H-Purin-6-amine, N,N'-(methylenedi-4,1-phenylene)bis[N-methyl-9-phenyl- (9CI) (CA INDEX NAME)

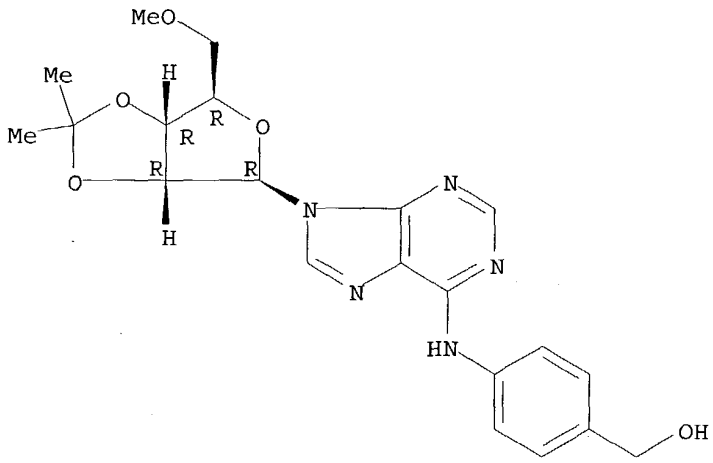


L32 ANSWER 10 OF 28 USPATFULL on STN
AN 2003:96074 USPATFULL
TI Chemical compounds
IN Eldred, Colin David, Stevenage, UNITED KINGDOM
Pennell, Andrew Michael Kenneth, San Francisco, CA, United States
PA SmithKline Beecham Corporation, Philadelphia, PA, United States (U.S. corporation)
PI US 6544960 B1 20030408
WO 9924451 19990520
AI US 2000-530575 20000615 (9)
WO 1998-EP7023 19981106
PRAI GB 1997-23590 19971108
DT Utility
FS GRANTED
EXNAM Primary Examiner: Richter, Johann; Assistant Examiner: Crane, L. E.

LREP Bacon & Thomas
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1064
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A compound of formula (I), wherein R.sup.2 represents C.sub.1-3alkyl, halogen or hydrogen; R.sup.3 represents straight or branched alkyl group of 1-6 carbon atoms; with the proviso that, when R.sup.3 represents C.sub.1-3alkyl, R.sup.2 represents C.sub.1-3alkyl, R.sup.1 cannot represent phenyl optionally substituted by one or more substituents selected from halogen, C.sub.1-3alkyl, trifluoromethyl, nitro, cyano, --CO.sub.2R.sup.c, --CONR.sup.cR.sup.d, --COR.sup.c, --SOR.sup.e, SO.sub.2R.sup.e, --SO.sub.3H, --SO.sub.2NR.sup.cR.sup.d, --OR.sup.c, --NHSO.sub.2R.sup.e, --NHCOR.sup.c and --NR.sup.cR.sup.d; and salts and solvates thereof, in particular, physiologically acceptable solvates and salts thereof. These compounds are agonists at the Adenosine A1 receptor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **223756-68-1P**
(preparation of nucleosides as adenosine A1 receptors)
RN 223756-68-1 USPATFULL
CN Adenosine, N-[4-(hydroxymethyl)phenyl]-5'-O-methyl-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

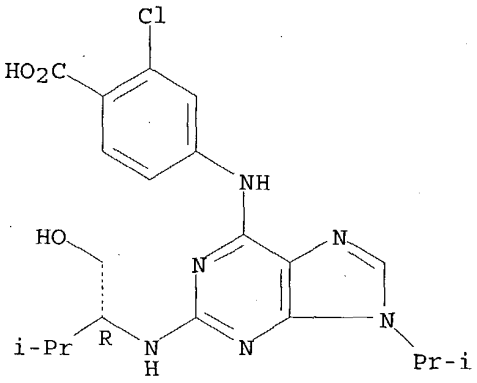


L32 ANSWER 11 OF 28 USPATFULL on STN
AN 2003:86849 USPATFULL
TI Cellular proteins as targets for the treatment of pathogens resistant to drugs that target pathogen-encoded proteins
IN Schaffer, Priscilla A., Boston, MA, UNITED STATES
Schang, Luis M., Edmonton, CANADA
PI US 2003060457 A1 20030327
AI US 2000-905695 A1 20001206 (9)
RLI Continuation-in-part of Ser. No. US 2000-951058, filed on 12 Sep 2000, PENDING Continuation-in-part of Ser. No. US 2000-656592, filed on 7 Sep 2000, PENDING Continuation of Ser. No. WO 1999-US16252, filed on 16 Jul 1999, PENDING

PRAI US 1998-94805P 19980731 (60)
US 1999-131264P 19990427 (60)
US 1999-140926P 19990624 (60)
DT Utility
FS APPLICATION
LREP MORGAN, LEWIS & BOCKIUS LLP, 1701 MARKET STREET, PHILADELPHIA, PA, 19103-2921
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN 38 Drawing Page(s)
LN.CNT 3979
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the identification of cdk inhibitors as inhibitors of gene expression, replication and reactivation in pathogenic agents. Compositions and assays for the identification and use of such inhibitors are provided, as are methods of use of the inhibitors

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(cellular proteins as targets for treatment of pathogens resistant to drugs targeting pathogen-encoded proteins, and use of cdk inhibitors)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

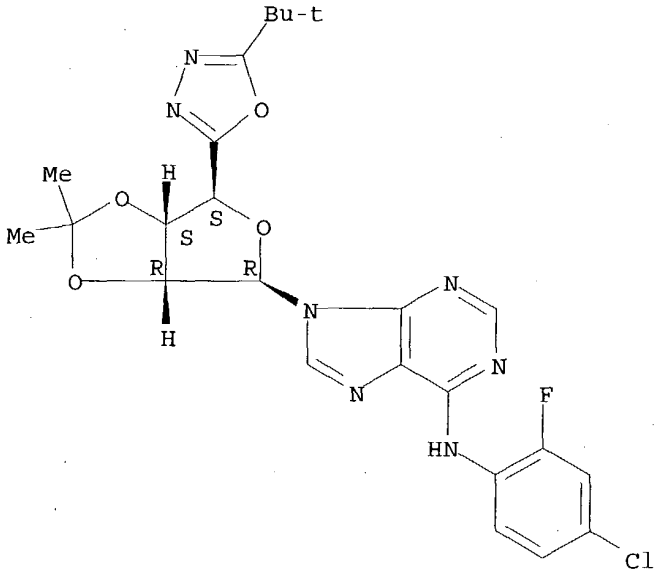


L32 ANSWER 12 OF 28 USPATFULL on STN
AN 2003:24165 USPATFULL
TI Formulations of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003018008 A1 20030123
AI US 2002-168190 A1 20020618 (10)
WO 2000-GB4902 20001219
PRAI GB 1999-300774 19991220
DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398

CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 891
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and a 5HT.sub.3 antagonist or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

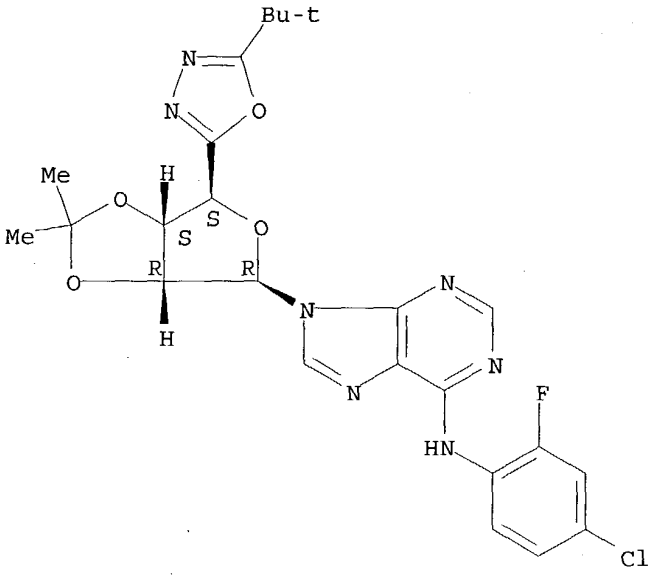


L32 ANSWER 13 OF 28 USPATFULL on STN
AN 2003:11138 USPATFULL
TI Formulations of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003008842 A1 20030109
AI US 2002-168196 A1 20020618 (10)
WO 2000-GB4888 20001219
PRAI GB 1999-30079 19991220
DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE

MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 834
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and a sodium channel blocker or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

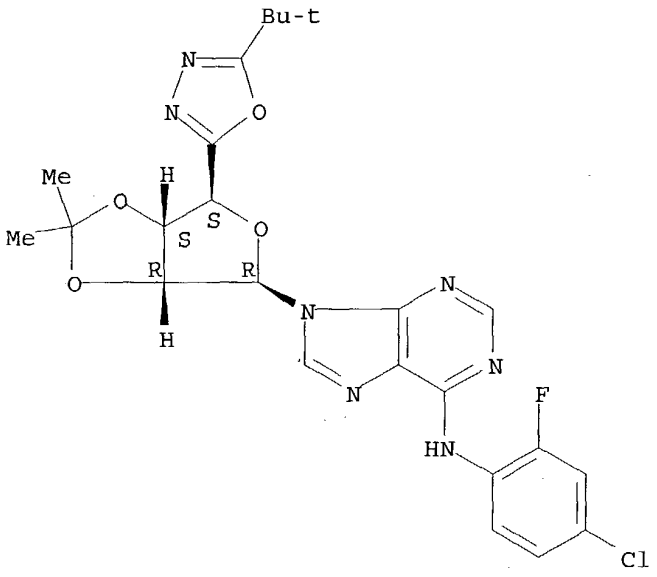


L32 ANSWER 14 OF 28 USPATFULL on STN
AN 2003:4090 USPATFULL
TI Formulations of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003004129 A1 20030102
AI US 2002-168242 A1 20020618 (10)
WO 2000-GB4892 20001219
PRAI GB 1999-30083 19991220
DT Utility
FS APPLICATION

LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 663
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, (i) an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and (ii) gabapentin or pregabalin or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 receptor agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

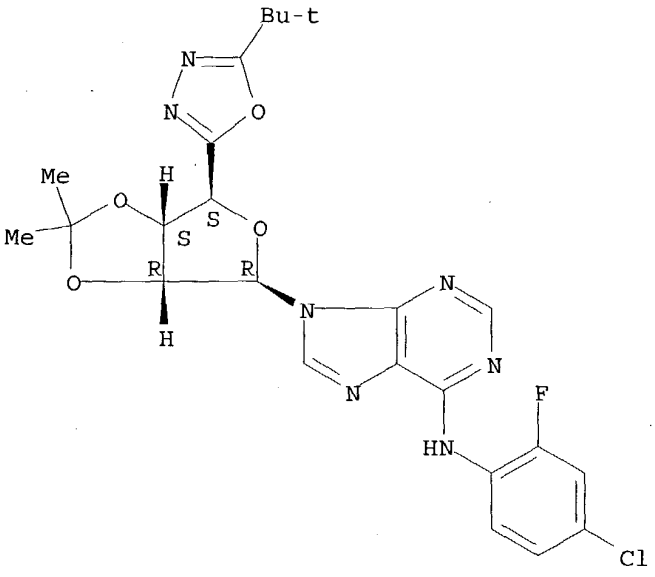


L32 ANSWER 15 OF 28 USPATFULL on STN
AN 2003:4089 USPATFULL
TI Formulatios of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003004128 A1 20030102
AI US 2002-168195 A1 20020618 (10)
WO 2000-GB4883 20001219
PRAI GB 1999-30075 19991220

DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 895
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and an NSAID, e.g. a COX-2 inhibitor, or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

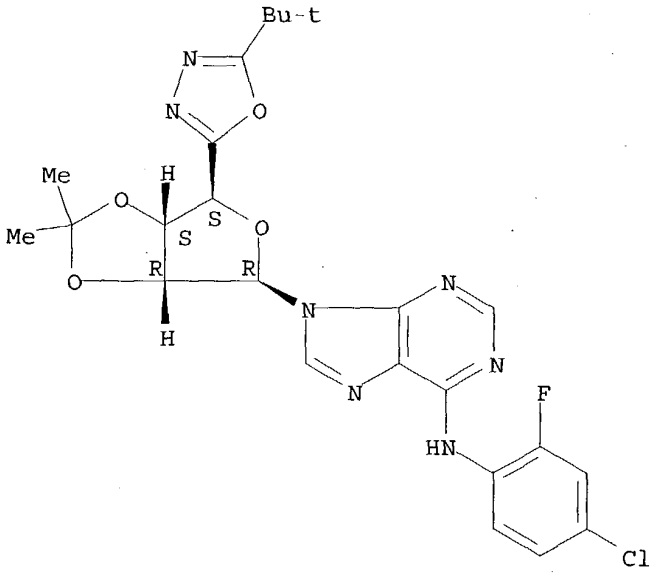


L32 ANSWER 16 OF 28 USPATFULL on STN
AN 2003:4088 USPATFULL
TI Formulations of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003004127 A1 20030102
AI US 2002-168193 A1 20020618 (10)
WO 2000-GB4878 20001219

PRAI GB 1999-30085 19991220
DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 743
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and a 5HT1 receptor agonist or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 receptor agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

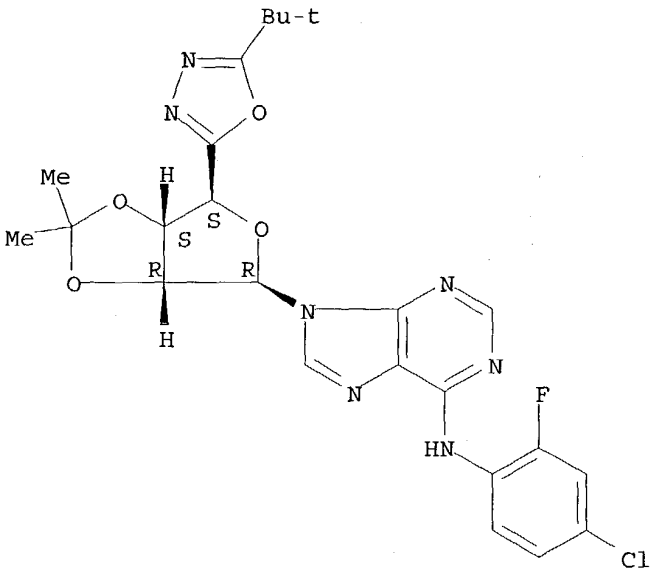


L32 ANSWER 17 OF 28 USPATFULL on STN
AN 2003:4087 USPATFULL
TI Formulations of adenosine A1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2003004126 A1 20030102
AI US 2002-168189 A1 20020618 (10)

WO 2000-GB4885 20001219
PRAI GB 1999-30071 19991220
DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, an adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and an opioid or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 receptor agonists as analgesics)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

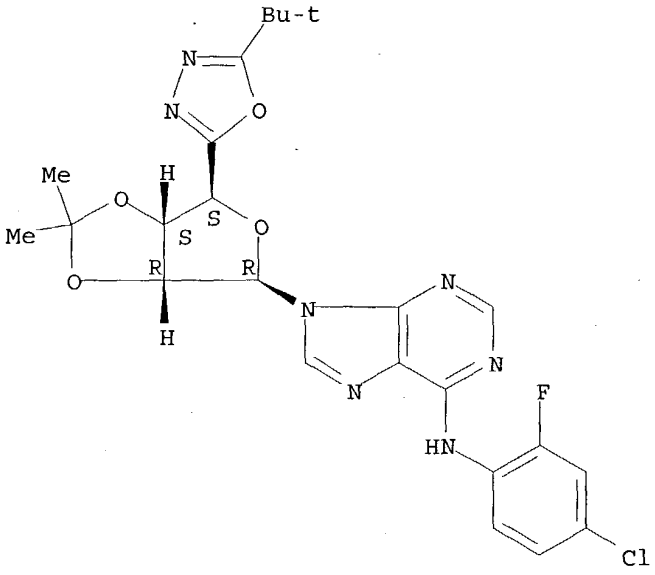


L32 ANSWER 18 OF 28 USPATFULL on STN
AN 2002:344440 USPATFULL
TI Formulations of adenosine a1 agonists
IN Bountra, Charanjit, Stevenage, UNITED KINGDOM
Clayton, Nicholas Maughan, Stevenage, UNITED KINGDOM
Naylor, Alan, Stevenage, UNITED KINGDOM
PI US 2002198170 A1 20021226

AI US 2002-168283 A1 20020618 (10)
WO 2000-GB4970 20001219
PRAI GB 1999-30082 19991220
DT Utility
FS APPLICATION
LREP DAVID J LEVY, CORPORATE INTELLECTUAL PROPERTY, GLAXOSMITHKLINE, FIVE MOORE DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 674
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method of treating conditions associated with pain and alleviating the symptoms associated therewith which comprises administering to a mammal, including man, a adenosine A1 agonist or a physiologically acceptable salt or solvate thereof and an EP1 antagonist or a physiologically acceptable salt or solvate thereof. The present invention also provides pharmaceutical formulations and patient packs comprising said combinations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-02-5P**
(formulations of adenosine A1 agonists)
RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

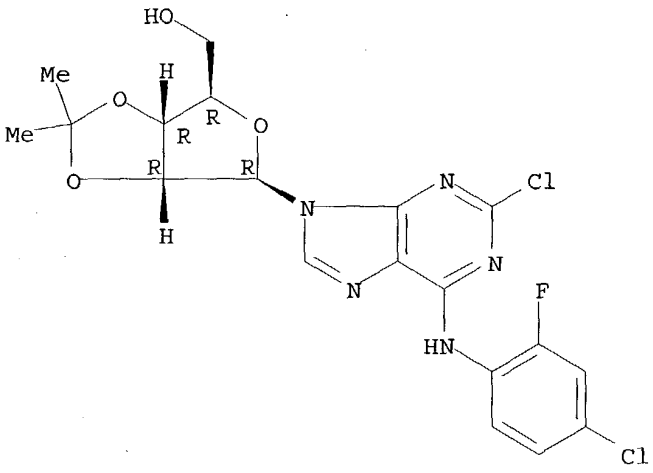


L32 ANSWER 19 OF 28 USPATFULL on STN
AN 2002:325996 USPATFULL
TI Adenosine derivatives
IN Bays, David Edmund, Ware, UNITED KINGDOM
Cousins, Richard Peter Charles, Stevenage, UNITED KINGDOM
Dyke, Hazel Joan, Cambridge, UNITED KINGDOM

Eldred, Colin David, Stevenage, UNITED KINGDOM
Judkins, Brian David, Stevenage, UNITED KINGDOM
Pass, Martin, Stevenage, UNITED KINGDOM
Pennell, Andrew Michael Kenneth, San Carlos, CA, United States
PA SmithKline Beecham Corporation, Philadelphia, PA, United States (U.S. corporation)
PI US 6492348 B1 20021210
WO 9967262 19991229
AI US 2001-736018 20010306 (9)
WO 1999-EP4182 19990621
PRAI GB 1998-13554 19980623
DT Utility
FS GRANTED
EXNAM Primary Examiner: Richter, Johann; Assistant Examiner: Crane, L E
LREP Bacon & Thomas
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 3918
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A compound of formula (I) which is an agonist at the adenosine A1 receptor, wherein Y, Z, and W represent heteroatoms, and salts and solvates thereof, in particular, physiologically acceptable solvates and salts thereof for use in therapy. ##STR1##

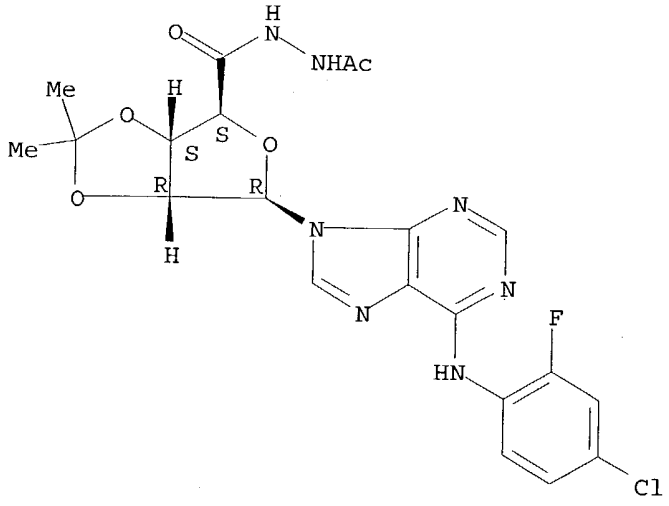
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-11-6 253127-16-1**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253127-11-6 USPATFULL
CN Adenosine, 2-chloro-N-(4-chloro-2-fluorophenyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



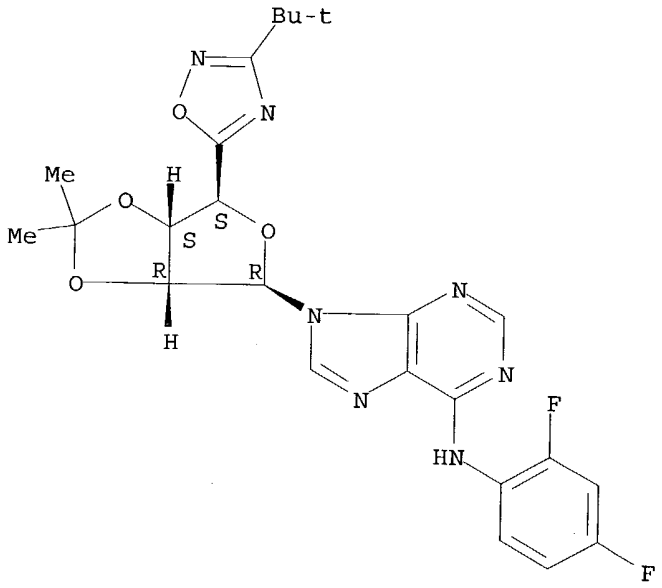
RN 253127-16-1 USPATFULL
CN β-D-Ribofuranuronic acid, 1-[6-[(4-chloro-2-fluorophenyl)amino]-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, 2-acetylhydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



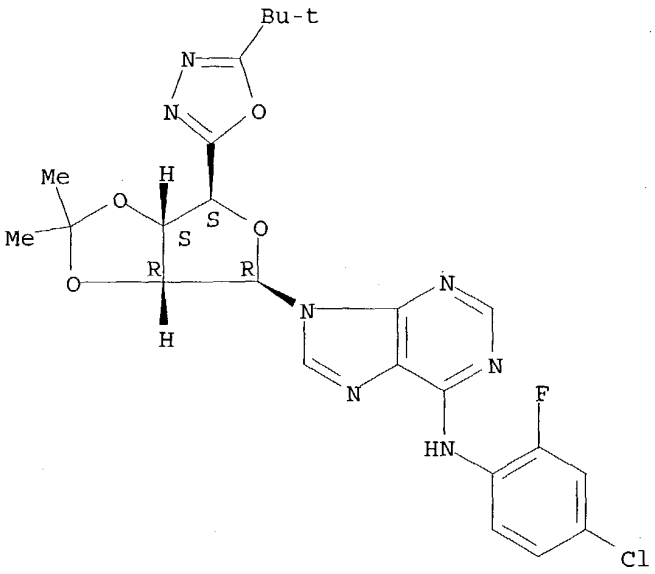
IT **253126-92-0P 253127-02-5P**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253126-92-0 USPATFULL
CN 9H-Purin-6-amine, N-(2,4-difluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[3-(1,1-dimethylethyl)-1,2,4-oxadiazol-5-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253127-02-5 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



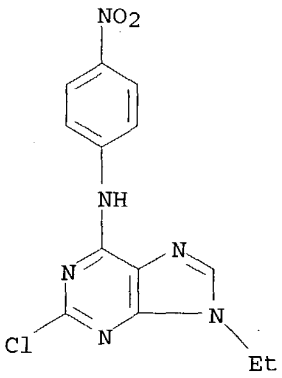
L32 ANSWER 20 OF 28 USPATFULL on STN
AN 2002:27481 USPATFULL
TI 2-Amino-6-anilino-purines and their use as medicaments
IN Imbach, Patricia, Kaiseraugst, SWITZERLAND
Capraro, Hans-Georg, Rheinfelden, SWITZERLAND
Zimmermann, Jurg, Therwil, SWITZERLAND
Caravatti, Giorgio, Bottmingen, SWITZERLAND
Furet, Pascal, Thann, FRANCE
Brill, Wolfgang Karl-Diether, Cesate, ITALY
PI US 2002016329 A1 20020207
AI US 2001-927322 A1 20010810 (9)
RLI Continuation of Ser. No. WO 2000-EP1271, filed on 16 Feb 2000, UNKNOWN
PRAI GB 1999-3762 19990218
DT Utility
FS APPLICATION
LREP THOMAS HOXIE, NOVARTIS CORPORATION, PATENT AND TRADEMARK DEPT, 564 MORRIS AVENUE, SUMMIT, NJ, 079011027
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 3321
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB 2-Amino-6-anilino-purine derivatives of the formula I ##STR1##

in which the symbols are as defined in claim 1, are described.

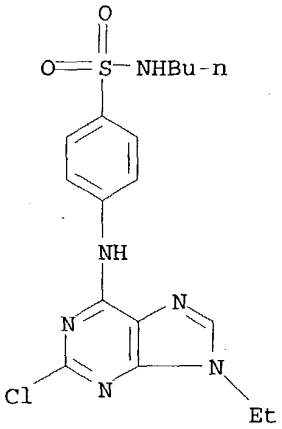
These compounds inhibit p34.sup.cdc2/cyclin B.sup.cdc13 kinase and protein tyrosine kinase pp60.sup.c-src and can be used for treatment of hyperproliferative diseases, for example tumor diseases, and diseases which respond to inhibition of the activity of protein tyrosine kinase pp60.sup.c-src, in particular osteoporosis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **289480-24-6**
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin

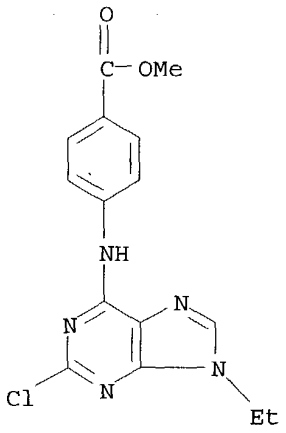
Bcdc13 kinase and protein tyrosine kinase pp60c-src)
RN 289480-24-6 USPATFULL
CN 9H-Purin-6-amine, 2-chloro-9-ethyl-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)



IT **289480-15-5P 289480-18-8P**
(preparation of 2-amino-6-anilinopurines as inhibitors of p34cdc2/cyclin Bcdc13 kinase and protein tyrosine kinase pp60c-src)
RN 289480-15-5 USPATFULL
CN Benzenesulfonamide, N-butyl-4-[(2-chloro-9-ethyl-9H-purin-6-yl)amino]- (9CI) (CA INDEX NAME)



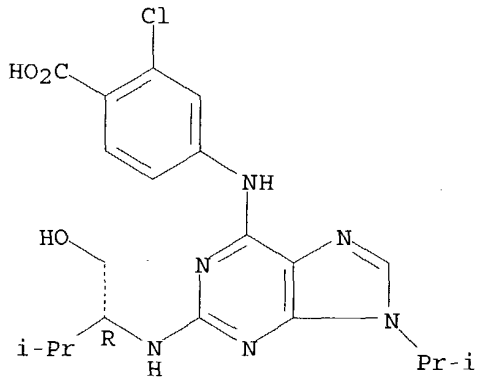
RN 289480-18-8 USPATFULL
CN Benzoic acid, 4-[(2-chloro-9-ethyl-9H-purin-6-yl)amino]-, methyl ester (9CI) (CA INDEX NAME)



L32 ANSWER 21 OF 28 USPATFULL on STN
AN 2001:237655 USPATFULL
TI Exploiting genomics in the search for new drugs
IN Lockhart, David J., Del Mar, CA, United States
Wodicka, Lisa, San Diego, CA, United States
Ho, Ming Hsiu, San Jose, CA, United States
PI US 2001055771 A1 20011227
US 6524800 B2 20030225
AI US 2001-900845 A1 20010706 (9)
RLI Division of Ser. No. US 1998-215207, filed on 18 Dec 1998, UNKNOWN
DT Utility
FS APPLICATION
LREP BANNER & WITCOFF LTD.,, ATTORNEYS FOR AFFYMETRIX, 1001 G STREET , N.W., ELEVENTH FLOOR, WASHINGTON, DC, 20001-4597
CLMN Number of Claims: 79
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 2055
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The cellular effects of potentially therapeutic compounds are characterized in mammalian cells and yeast. In the latter case the effects can be characterized on a genome-wide scale by monitoring changes in messenger RNA levels in treated cells with high-density oligonucleotide probe arrays.

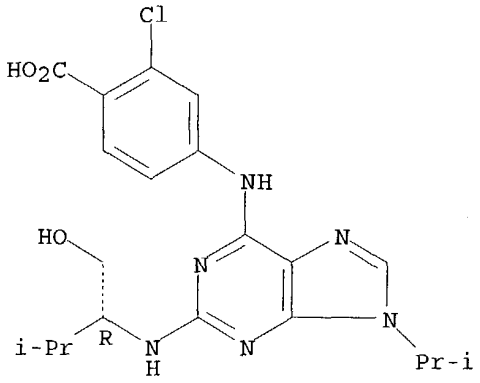
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(genomics in search for new drugs)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 complexes
(genomics in search for new drugs)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

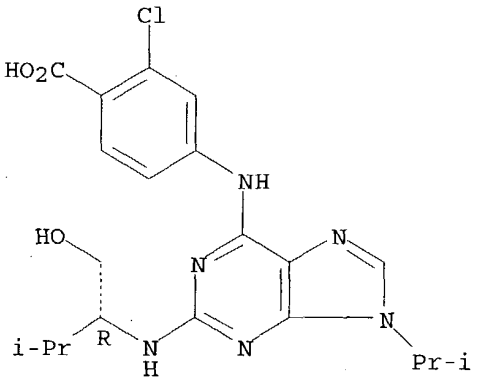


L32 ANSWER 22 OF 28 USPATFULL on STN
AN 2001:235088 USPATFULL
TI Exploiting genomics in the search for new drugs
IN Lockhart, David J., Del Mar, CA, United States
Wodicka, Lisa, San Diego, CA, United States
Ho, Ming Hsiu, San Jose, CA, United States
PA Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation)
PI US 6333155 B1 20011225
AI US 1998-215207 19981218 (9)
PRAI US 1997-68289P 19971219 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fredman, Jeffrey; Assistant Examiner: Chakrabarti, Arun Kr.
LREP Banner & Witcoff
CLMN Number of Claims: 14
ECL Exemplary Claim: 1

DRWN 11 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1865
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The cellular effects of potentially therapeutic compounds are characterized in mammalian cells and yeast. In the latter case the effects can be characterized on a genome-wide scale by monitoring changes in messenger RNA levels in treated cells with high-density oligonucleotide probe arrays.

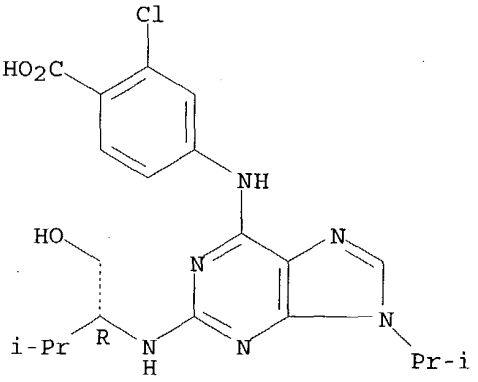
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(genomics in search for new drugs)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 complexes
(genomics in search for new drugs)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

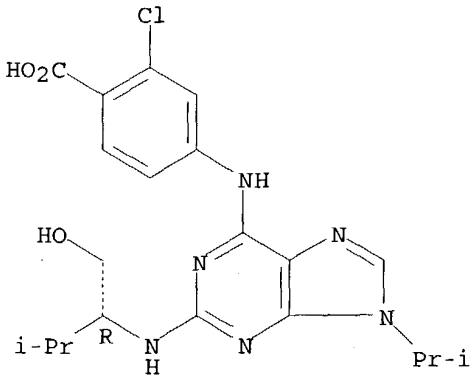
Absolute stereochemistry.



L32 ANSWER 23 OF 28 USPATFULL on STN
AN 2001:102994 USPATFULL
TI Purine inhibitors of protein kinases, G proteins and polymerases
IN Gray, Nathanael S., Berkeley, CA, United States
Schultz, Peter, Oakland, CA, United States
Kim, Sung-Hou, Moraga, CA, United States
Meijer, Laurent, Roscoff, France
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
Centre National de la Recherche Scientifique, Paris, France (non-U.S. corporation)
PI US 6255485 B1 20010703
AI US 1998-130255 19980806 (9)
PRAI US 1997-55400P 19970807 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Berch, Mark L.
LREP Townsend and Townsend and Crew LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1,2,3,4,5
DRWN 3 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1028
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to purine analogs that inhibit, inter alia, protein kinases, G-proteins and polymerases. In addition, the present invention relates to methods of using such purine analogs to inhibit protein kinases, G-proteins, polymerases and other cellular processes and to treat cellular proliferative diseases.

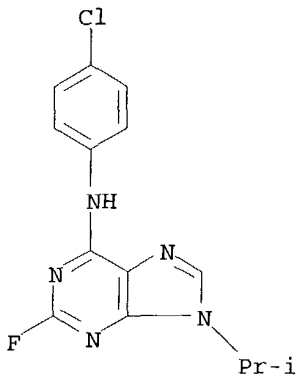
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7P**, NG 95
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)
RN 212844-54-7 USPATFULL
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **220696-59-3P**
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

RN 220696-59-3 USPATFULL
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



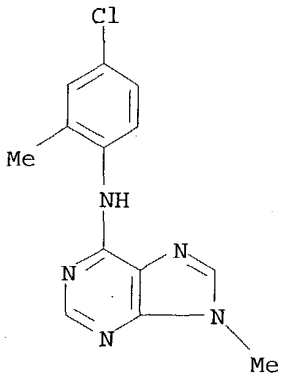
L32 ANSWER 24 OF 28 USPATFULL on STN
AN 93:89407 USPATFULL
TI Composition for determining viability of tissue
IN McAfee, Donald A., Richmond, VA, United States
Belardinelli, Luiz, Gainesville, FL, United States
PA Whitby Research, Inc., Richmond, VA, United States (U.S. corporation)
PI US 5256398 19931026
AI US 1992-828115 19920130 (7)
RLI Division of Ser. No. US 1990-610544, filed on 8 Nov 1990, now patented, Pat. No. US 5117830
DT Utility
FS Granted
EXNAM Primary Examiner: Raymond, Richard L.
LREP Hammond, Richard J.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 714
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method and composition of determining the viability of tissue in a region of an organism having a vascular circulatory system that supplies blood to said region is disclosed. The composition includes the combination of adenosine or an adenosine antagonist in combination with an A.sub.1 adenosine receptor which may be: ##STR1## wherein R.sub.1 is hydrogen or R.sub.2 ; R.sub.2 is selected from the group consisting of endo-2-norbornyl or cyclopentyl; R.sub.3 is selected from the group consisting of hydrogen, halogen, amine, carboxy, alkyl radicals having 1 to 10 carbon atoms, cycloalkyl radicals having from 3 to 8 ring carbon atoms, thio sulfonate, sulfonamide, sulfone, sulfoxamide, phenyl, alkyl-substituted amine, and cycloalkyl substituted amine; R.sub.4 is selected from the group consisting of benzyl, phenyl, alkyl groups comprising from 1 to 4 carbon atoms, wherein said alkyl group can be substituted with oxygen, for instance ethers and alcohols; and R.sub.5 is selected from the group consisting of hydrogen, hydroxy, sulfonate, halogen, alkoxy and cycloalkoxy groups comprising 1 to 6 carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **152570-90-6**

(adenosine antagonist activity of, tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)

RN 152570-90-6 USPATFULL

CN 9H-Purin-6-amine, N-(4-chloro-2-methylphenyl)-9-methyl- (9CI) (CA INDEX NAME)



L32 ANSWER 25 OF 28 USPATFULL on STN

AN 92:43977 USPATFULL

TI Method of determining viability of tissue

IN McAfee, Donald A., Richmond, VA, United States
Belardinelli, Luiz, Gainesville, FL, United States

PA Whitby Research, Inc., Richmond, VA, United States (U.S. corporation)

PI US 5117830 19920602

AI US 1990-610544 19901108 (7)

DT Utility

FS Granted

EXNAM Primary Examiner: Rosenbaum, C. Fred; Assistant Examiner: Finkel, Sharon

LREP Hackler, Walter A., Hammond, Richard J.

CLMN Number of Claims: 21

ECL Exemplary Claim: 1

DRWN No Drawings

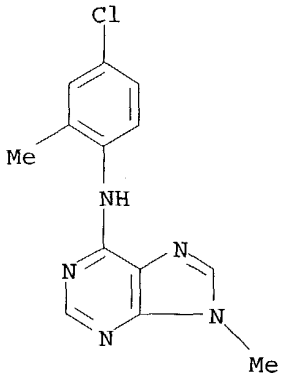
LN.CNT 746

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method and composition for determining the viability of tissue in a region of an organism having a vascular circulatory system that supplies blood to said region including the steps of dilating said vascular circulation system by introducing adenosine or an adenosine agonist into said vascular circulation system in order to increase the flow of blood into said region; introducing a blood flow marking medium into said region; alleviating the non-dilating effects of adenosine or said adenosine agonist by introducing an A.sub.1 adenosine receptor antagonist into said vascular circulatory system; and determining the amount of marking medium in said region. A composition is disclosed which includes the combination of adenosine or an adenosine agonist in combination with an A.sub.1 adenosine receptor which may be: ##STR1## wherein R.sub.1 is hydrogen or R.sub.2 ; R.sub.2 is selected from the group consisting of endo-2-norbornyl or cyclopentyl; R.sub.3 is selected from the group consisting of hydrogen, halogen, amine, carboxy, alkyl radicals having 1 to 10 carbon atoms, cycloalkyl radicals having from 3 to 8, preferably 5 to 6, ring carbon atoms, thio, sulfonate, sulfonamide, sulfon, sulfoxamide, phenyl, alkyl-substituted amine, and

cycloalkyl substituted amine; R.sub.4 is selected from the group consisting of benzyl, phenyl, and alkyl groups comprising from 1 to 4 carbon atoms, wherein said alkyl group can be substituted with oxygen, for instance ethers and alcohols; and R.sub.5 is selected from the group consisting of hydrogen; hydroxy; sulfonate; halogen; alkoxy and cycloalkoxy groups comprising 1 to 6 carbon atoms.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **152570-90-6**
(adenosine antagonist activity of, tissue viability determination with adenosine/adenosine agonist and adenosine A1 receptor antagonist in relation to)
RN 152570-90-6 USPATFULL
CN 9H-Purin-6-amine, N-(4-chloro-2-methylphenyl)-9-methyl- (9CI) (CA INDEX NAME)



L32 ANSWER 26 OF 28 USPAT2 on STN
AN 2003:166814 USPAT2
TI Purine inhibitors of protein kinases, G proteins and polymerases
IN Gray, Nathanael S., Berkeley, CA, United States
Schultz, Peter, Oakland, CA, United States
Kim, Sung-Hou, Moraga, CA, United States
Meijer, Laurent, Roscoff, FRANCE
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
Centre National de la Recherche Scientifique, Paris, FRANCE (non-U.S. corporation)
PI US 6617331 B2 20030909
AI US 2001-847007 20010501 (9)
RLI Continuation of Ser. No. US 1998-130255, filed on 6 Aug 1998, now patented, Pat. No. US 6255485
PRAI US 1997-55400P 19970807 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Berch, Mark L.
LREP Townsend and Townsend and Crew LLP
CLMN Number of Claims: 5
ECL Exemplary Claim: 1,5
DRWN 3 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1027
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides compounds having the structure: ##STR1##

where, R.sup.1 is a member selected from the group consisting of H and NH.sub.2; R.sup.2 is member selected from the group consisting of H, CO.sub.2H, OH and halogen; and R.sup.3 is a member selected from the group consisting of CO.sub.2H, NH.sub.2 and halogen. Also provided are methods of using the compounds and formulations containing the compounds.

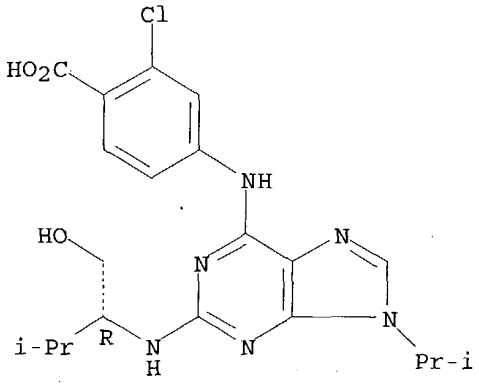
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **212844-54-7P**, NG 95
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

RN 212844-54-7 USPAT2

CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

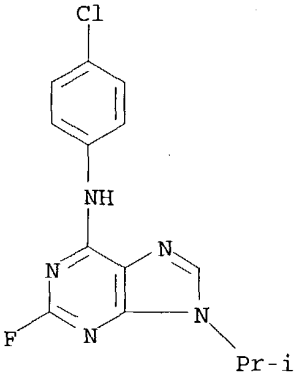
Absolute stereochemistry.



IT **220696-59-3P**
(preparation of purine derivs. as inhibitors of protein kinases, G-proteins and polymerases)

RN 220696-59-3 USPAT2

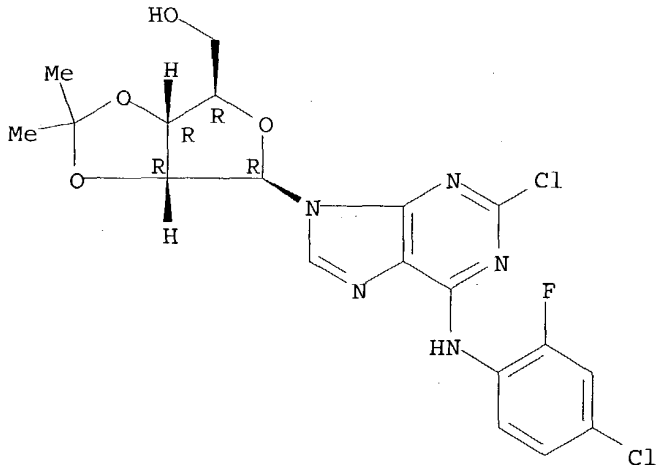
CN 9H-Purin-6-amine, N-(4-chlorophenyl)-2-fluoro-9-(1-methylethyl)- (9CI) (CA INDEX NAME)



L32 ANSWER 27 OF 28 USPAT2 on STN
AN 2003:140946 USPAT2
TI Adenosine derivatives and methods of administration
IN Bays, David Edmund, Ware, UNITED KINGDOM
Cousins, Richard Peter Charles, Stevenage, UNITED KINGDOM
Dyke, Hazel Joan, Cambridge, UNITED KINGDOM
Eldred, Colin David, Stevenage, UNITED KINGDOM
Judkins, Brian David, Stevenage, UNITED KINGDOM
Pass, Martin, Macclesfield, UNITED KINGDOM
Pennell, Andrew Michael Kenneth, San Carlos, CA, United States
PA SmithKline Beecham Corporation, Philadelphia, PA, United States (U.S. corporation)
PI US 6677316 B2 20040113
AI US 2002-217107 20020813 (10)
RLI Continuation of Ser. No. US 736018, now patented, Pat. No. US 6492348, issued on 10 Dec 2002
PRAI GB 1998-13554 19980623
DT Utility
FS GRANTED
EXNAM Primary Examiner: Wilson, James O.; Assistant Examiner: Crane, Lawrence E
LREP Bacon & Thomas, PLLC
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 3962
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of treating a patient suffering from or susceptible to ischemic heart disease, peripheral vascular disease or stroke or which subject is suffering pain, a CNS disorder or sleep apnea which comprises administering a therapeutically effective amount of an adenosine derivative which is an agonist at the adenosine A1 receptor and which exhibits little or no agonist activity of the A3 receptor. The adenosine derivative has a general formula (I) as follows: ##STR1##

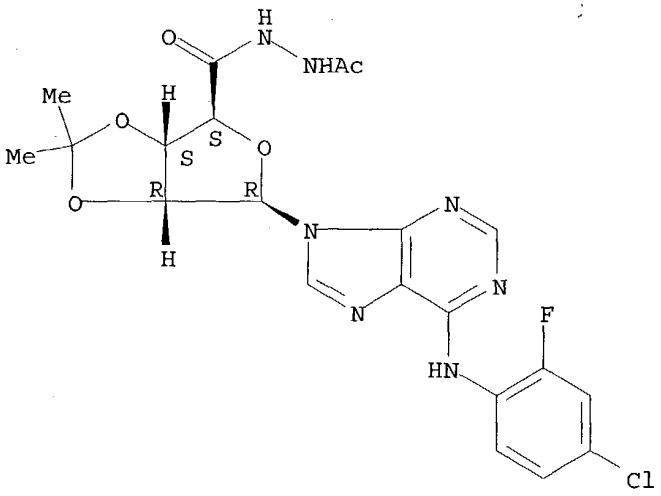
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **253127-11-6 253127-16-1**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253127-11-6 USPAT2
CN Adenosine, 2-chloro-N-(4-chloro-2-fluorophenyl)-2',3'-O-(1-methylethylidene)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



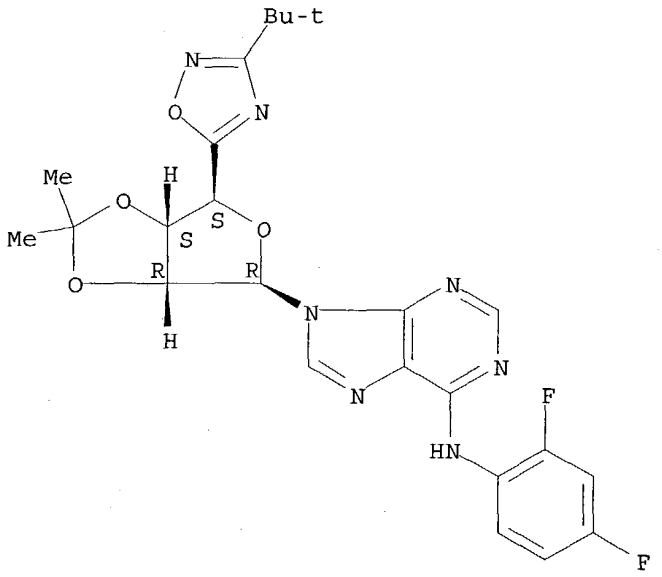
RN 253127-16-1 USPAT2
CN β-D-Ribofuranuronic acid, 1-[6-[(4-chloro-2-fluorophenyl)amino]-9H-purin-9-yl]-1-deoxy-2,3-O-(1-methylethylidene)-, 2-acetylhydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



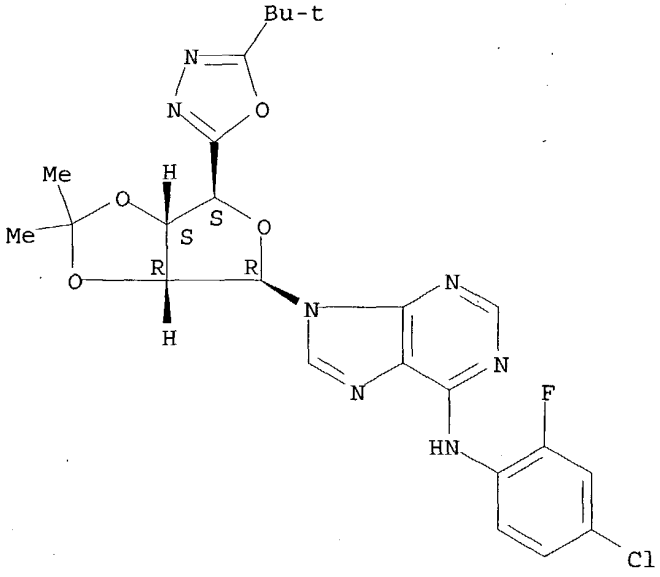
IT **253126-92-0P 253127-02-5P**
(preparation of adenosine derivs. as antiinflammatory agents)
RN 253126-92-0 USPAT2
CN 9H-Purin-6-amine, N-(2,4-difluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[3-(1,1-dimethylethyl)-1,2,4-oxadiazol-5-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 253127-02-5 USPAT2
CN 9H-Purin-6-amine, N-(4-chloro-2-fluorophenyl)-9-[(3aR,4R,6S,6aS)-6-[5-(1,1-dimethylethyl)-1,3,4-oxadiazol-2-yl]tetrahydro-2,2-dimethylfuro[3,4-d]-1,3-dioxol-4-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

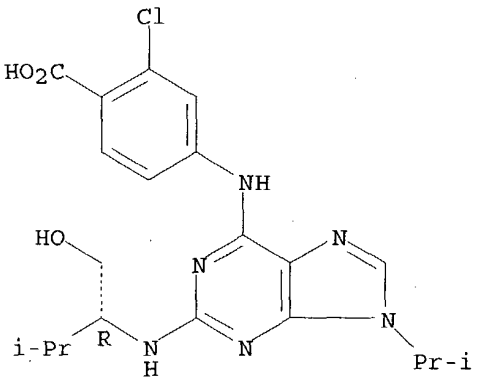


L32 ANSWER 28 OF 28 USPAT2 on STN
AN 2001:237655 USPAT2
TI Exploiting genomics in the search for new drugs
IN Lockhart, David J., Del Mar, CA, United States
Wodicka, Lisa, San Diego, CA, United States

Ho, Ming Hsiu, San Jose, CA, United States
PA Affymetrix, Inc., Santa Clara, CA, United States (U.S. corporation)
PI US 6524800 B2 20030225
AI US 2001-900845 20010706 (9)
RLI Continuation of Ser. No. US 1998-215207, filed on 18 Dec 1998, now patented, Pat. No. US 6333155
PRAI US 1997-68289P 19971219 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Chakrabarti, Arun Kr.
LREP Barner & Witcoff, Ltd.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1882
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The cellular effects of potentially therapeutic compounds are characterized in mammalian cells and yeast. In the latter case the effects can be characterized on a genome-wide scale by monitoring changes in messenger RNA levels in treated cells with high-density oligonucleotide probe arrays.

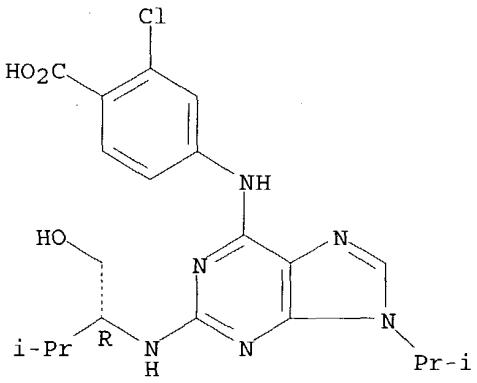
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **212844-54-7**, Purvalanol B
(genomics in search for new drugs)
RN 212844-54-7 USPAT2
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **212844-54-7D**, Purvalanol B, cdk2 complexes
(genomics in search for new drugs)
RN 212844-54-7 USPAT2
CN Benzoic acid, 2-chloro-4-[[2-[[(1R)-1-(hydroxymethyl)-2-methylpropyl]amino]-9-(1-methylethyl)-9H-purin-6-yl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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FILE COVERS 1907-1966
FILE LAST UPDATED: 01 May 1997 (19970501/UP)

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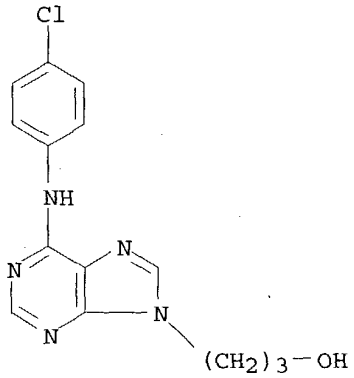
L33 ANSWER 1 OF 2 HCAOLD COPYRIGHT 2004 ACS on STN
AN CA62:4270c CAOLD
TI enzyme inhibitors - (VI) studies on the bulk tolerance of adenosine deaminase for 6-substituted amino-9-(3-hydroxypropyl)pyrines
AU Schaeffer, Howard J.; Vince, R.
IT 711-64-8 944-58-1 944-81-0 947-78-4 954-87-0 964-27-2
967-00-0 967-01-1 1133-35-3 1144-14-5 1147-38-2
92333-90-9
IT **967-00-0**
RN 967-00-0 HCAOLD
CN 9H-Purine-9-propanol, 6-(p-chloroanilino)- (7CI, 8CI) (CA INDEX NAME)



L33 ANSWER 2 OF 2 HCAOLD COPYRIGHT 2004 ACS on STN
AN CA55:10460a CAOLD
TI synthesis of potential anticancer agents - (XXVI) alkylation of 6-chloropurine
AU Montgomery, John A.; Temple, C., Jr.
IT 1214-39-7 1670-62-8 1928-76-3 1928-77-4 5462-86-2 6268-73-1
6277-53-8 6298-52-8 6298-53-9 6332-42-9 6937-62-8 6973-54-2
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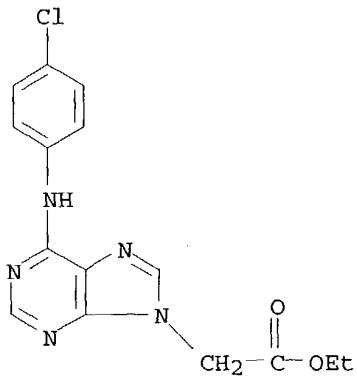
101103-22-4 109394-60-7 **111355-18-1**
IT **101103-22-4 111355-18-1**
RN 101103-22-4 HCAOLD
CN 9H-Purine-9-acetic acid, 6-p-chloroanilino-, ethyl ester (6CI) (CA INDEX NAME)



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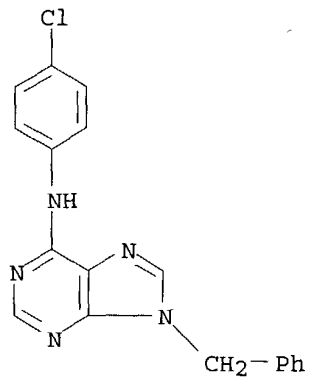
CN Adenine, 9-benzyl-N6-(p-chlorophenyl)- (6CI) (CA INDEX NAME)

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L7            69 S E3-8
                E SHENG DENG/AU
                E GRAY N/AU
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L10            1 S L1-9 AND OSTEOGEN?
L11            7 S L1-9 AND OSTEO?  Authors

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US 1068722008P1

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